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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 15:12:25 ON 21 MAY 2003

=> fil .bec
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 15:12:48 ON 21 MAY 2003
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s (sanitiz? or disinfect? or antimicrob? or antibacter? or antifung? or (kill?
or inhibit?))(3a)(bacter? or microb?) and (peroxidase# or oxidase#)
FILE 'MEDLINE'
           374 SANITIZ?
         13764 DISINFECT?
         34930 ANTIMICROB?
         19499 ANTIBACTER?
         24367 ANTIFUNG?
         93270 KILL?
       1028829 INHIBIT?
        540696 BACTER?
        451067 MICROB?
         11751 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         59225 PEROXIDASE#
         66244 OXIDASE#
L1         355 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
               SE# OR OXIDASE#)

FILE 'SCISEARCH'
           581 SANITIZ?
          8715 DISINFECT?
         33211 ANTIMICROB?
         17342 ANTIBACTER?
         14197 ANTIFUNG?
         76873 KILL?
        817422 INHIBIT?
        297189 BACTER?
        104443 MICROB?
         10157 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         44100 PEROXIDASE#
         57408 OXIDASE#
L2         226 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
               SE# OR OXIDASE#)

FILE 'LIFESCI'
           262 SANITIZ?
          3527 DISINFECT?
         15345 ANTIMICROB?
         15131 ANTIBACTER?
          8916 ANTIFUNG?
         41204 KILL?
        285868 INHIBIT?
        165513 BACTER?
         44637 MICROB?
          7109 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
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              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         14070 PEROXIDASE#
         15649 OXIDASE#
L3         118 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

FILE 'BIOTECHDS'
            46 SANITIZ?
           345 DISINFECT?
          1354 ANTIMICROB?
          2359 ANTIBACTER?
          1008 ANTIFUNG?
          3631 KILL?
         40774 INHIBIT?
        100564 BACTER?
         16761 MICROB?
          2328 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
          3624 PEROXIDASE#
          5608 OXIDASE#
L4           40 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

FILE 'BIOSIS'
           815 SANITIZ?
         14603 DISINFECT?
         36724 ANTIMICROB?
        133520 ANTIBACTER?
         30759 ANTIFUNG?
        113119 KILL?
       1114018 INHIBIT?
        784240 BACTER?
        205783 MICROB?
         23927 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         71038 PEROXIDASE#
         79094 OXIDASE#
L5          370 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

FILE 'EMBASE'
           198 SANITIZ?
         11162 DISINFECT?
         39250 ANTIMICROB?
         25875 ANTIBACTER?
         21485 ANTIFUNG?
         87475 KILL?
        918898 INHIBIT?
        395427 BACTER?
         65099 MICROB?
         11557 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         45705 PEROXIDASE#
         54174 OXIDASE#
L6          232 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

FILE 'HCAPLUS'
          1695 SANITIZ?
         83417 DISINFECT?
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         47797 ANTIMICROB?
         65622 ANTIBACTER?
         21988 ANTIFUNG?
        102975 KILL?
       1572530 INHIBIT?
        500598 BACTER?
        335960 MICROB?
         74288 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         66758 PEROXIDASE#
        104902 OXIDASE#
L7         614 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
               SE# OR OXIDASE#)

FILE 'NTIS'
           264 SANITIZ?
          1772 DISINFECT?
           570 ANTIMICROB?
           345 ANTIBACTER?
           134 ANTIFUNG?
          5201 KILL?
         19806 INHIBIT?
         18077 BACTER?
         12346 MICROB?
           402 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
           450 PEROXIDASE#
           721 OXIDASE#
L8           6 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
               SE# OR OXIDASE#)

FILE 'ESBIOBASE'
           194 SANITIZ?
          2054 DISINFECT?
          9050 ANTIMICROB?
          4148 ANTIBACTER?
          4269 ANTIFUNG?
         27045 KILL?
        328969 INHIBIT?
        140260 BACTER?
        180949 MICROB?
          3896 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         13125 PEROXIDASE#
         15543 OXIDASE#
L9          90 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
               SE# OR OXIDASE#)

FILE 'BIOTECHNO'
           163 SANITIZ?
          2262 DISINFECT?
          7349 ANTIMICROB?
          4233 ANTIBACTER?
          3568 ANTIFUNG?
         29869 KILL?
        279584 INHIBIT?
        178880 BACTER?
         34874 MICROB?
          4309 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
               G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         12588 PEROXIDASE#
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        15688 OXIDASE#
L10       100 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

FILE 'WPIDS'
          856 SANITIZ?
        19763 DISINFECT?
        16819 ANTIMICROB?
        31584 ANTIBACTER?
         9406 ANTIFUNG?
        17751 KILL?
       193919 INHIBIT?
        85706 BACTER?
        36919 MICROB?
         8718 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?)
         4010 PEROXIDASE#
         5462 OXIDASE#
L11        52 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

TOTAL FOR ALL FILES
L12       2203 (SANITIZ? OR DISINFECT? OR ANTIMICROB? OR ANTIBACTER? OR ANTIFUN
              G? OR (KILL? OR INHIBIT?))(3A)(BACTER? OR MICROB?) AND (PEROXIDA
              SE# OR OXIDASE#)

=> s l12 and (coprinus or cinereus)
FILE 'MEDLINE'
          413 COPRINUS
          429 CINEREUS
L13         0 L1 AND (COPRINUS OR CINEREUS)

FILE 'SCISEARCH'
          945 COPRINUS
         1351 CINEREUS
L14         0 L2 AND (COPRINUS OR CINEREUS)

FILE 'LIFESCI'
          453 COPRINUS
          741 CINEREUS
L15         0 L3 AND (COPRINUS OR CINEREUS)

FILE 'BIOTECHDS'
          176 COPRINUS
           86 CINEREUS
L16         1 L4 AND (COPRINUS OR CINEREUS)

FILE 'BIOSIS'
         1517 COPRINUS
         2358 CINEREUS
L17         0 L5 AND (COPRINUS OR CINEREUS)

FILE 'EMBASE'
          356 COPRINUS
          340 CINEREUS
L18         0 L6 AND (COPRINUS OR CINEREUS)

FILE 'HCAPLUS'
          968 COPRINUS
          711 CINEREUS
L19         3 L7 AND (COPRINUS OR CINEREUS)
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FILE 'NTIS'
             2 COPRINUS
            17 CINEREUS
L20          0 L8 AND (COPRINUS OR CINEREUS)

FILE 'ESBIOBASE'
           227 COPRINUS
           388 CINEREUS
L21          0 L9 AND (COPRINUS OR CINEREUS)

FILE 'BIOTECHNO'
           221 COPRINUS
           213 CINEREUS
L22          0 L10 AND (COPRINUS OR CINEREUS)

FILE 'WPIDS'
           131 COPRINUS
            39 CINEREUS
L23          4 L11 AND (COPRINUS OR CINEREUS)

TOTAL FOR ALL FILES
L24          8 L12 AND (COPRINUS OR CINEREUS)

=> s l12 and (laundry or detergent#)
FILE 'MEDLINE'
          1598 LAUNDRY
         29319 DETERGENT#
L25           1 L1 AND (LAUNDRY OR DETERGENT#)

FILE 'SCISEARCH'
           606 LAUNDRY
         20044 DETERGENT#
L26           0 L2 AND (LAUNDRY OR DETERGENT#)

FILE 'LIFESCI'
           148 LAUNDRY
          8807 DETERGENT#
L27           0 L3 AND (LAUNDRY OR DETERGENT#)

FILE 'BIOTECHDS'
           274 LAUNDRY
          1467 DETERGENT#
L28           1 L4 AND (LAUNDRY OR DETERGENT#)

FILE 'BIOSIS'
           457 LAUNDRY
         33606 DETERGENT#
L29           2 L5 AND (LAUNDRY OR DETERGENT#)

FILE 'EMBASE'
           853 LAUNDRY
         21307 DETERGENT#
L30           0 L6 AND (LAUNDRY OR DETERGENT#)

FILE 'HCAPLUS'
         10575 LAUNDRY
         97367 DETERGENT#
L31          16 L7 AND (LAUNDRY OR DETERGENT#)

FILE 'NTIS'
           577 LAUNDRY
          1233 DETERGENT#
L32           1 L8 AND (LAUNDRY OR DETERGENT#)
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FILE 'ESBIOBASE'
          128 LAUNDRY
         6963 DETERGENT#
L33         0 L9 AND (LAUNDRY OR DETERGENT#)

FILE 'BIOTECHNO'
          112 LAUNDRY
        10064 DETERGENT#
L34         0 L10 AND (LAUNDRY OR DETERGENT#)

FILE 'WPIDS'
        10303 LAUNDRY
        39468 DETERGENT#
L35        10 L11 AND (LAUNDRY OR DETERGENT#)

TOTAL FOR ALL FILES
L36        31 L12 AND (LAUNDRY OR DETERGENT#)

=> s l24 or l36
FILE 'MEDLINE'
L37         1 L13 OR L25

FILE 'SCISEARCH'
L38         0 L14 OR L26

FILE 'LIFESCI'
L39         0 L15 OR L27

FILE 'BIOTECHDS'
L40         2 L16 OR L28

FILE 'BIOSIS'
L41         2 L17 OR L29

FILE 'EMBASE'
L42         0 L18 OR L30

FILE 'HCAPLUS'
L43        17 L19 OR L31

FILE 'NTIS'
L44         1 L20 OR L32

FILE 'ESBIOBASE'
L45         0 L21 OR L33

FILE 'BIOTECHNO'
L46         0 L22 OR L34

FILE 'WPIDS'
L47        11 L23 OR L35

TOTAL FOR ALL FILES
L48        34 L24 OR L36

=> dup rem l48
PROCESSING COMPLETED FOR L48
L49        27 DUP REM L48 (7 DUPLICATES REMOVED)

=> d tot

L49  ANSWER 1 OF 27  WPIDS (C) 2003 THOMSON DERWENT
TI   Antimicrobial composition comprising an enzymatic component and
     non-enzymatic biocide, is useful as a preservative or disinfectant.
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PI WO 2002008377 A1 20020131 (200227)* EN 35p C11D003-48
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2002028754 A1 20020307 (200227) C11D001-00
AU 2001068953 A 20020205 (200236) C11D003-48
IN AASLYNG, D; JOHANSEN, C

L49 ANSWER 2 OF 27 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
TI Antimicrobial compositions containing a phenol oxidizing enzyme system and an enhancing agent
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
IN Schneider, Palle; Moller, Soren; Biedermann, Kirsten; Johansen, Charlotte
AN 2001:833004 HCAPLUS
DN 135:354168

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001084937	A1	20011115	WO 2001-DK315	20010507

PI W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2002102246 A1 20020801 US 2001-850316 20010507

L49 ANSWER 3 OF 27 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
TI Enzymatic composition containing haloperoxidase for **killing** or **inhibiting microbial** cells at high pH
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
IN Johansen, Charlotte
AN 2001:136946 HCAPLUS
DN 134:189430

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001011969	A1	20010222	WO 2000-DK451	20000811

PI W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

L49 ANSWER 4 OF 27 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI New compositions containing enzymes, useful for treating biofilm structures and **killing bacteria** or fungi that produce the biofilm, especially useful in industrial processes where fouling occurs or in implanted medical devices;
the use of enzyme-anchor complex, fusion protein and antibiotic for bacterium, fungus infection therapy
AU BUDNY J A; BUDNY M J
AN 2002-06723 BIOTECHDS
PI WO 2001093875 13 Dec 2001

L49 ANSWER 5 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Cloning, sequencing and use of haloperoxidase from Geniculosporium
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
IN Danielsen, Steffen; Schneider, Palle
AN 2001:781093 HCAPLUS
DN 135:340837

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001079460	A2	20011025	WO 2001-DK242	20010410
WO 2001079460	A3	20020124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002058320	A1	20020516	US 2001-832614	20010411
US 6410292	B1	20020625		
US 2002072086	A1	20020613	US 2001-832498	20010411
US 6410291	B1	20020625		
US 2002183506	A1	20021205	US 2002-151557	20020518

L49 ANSWER 6 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Bactericide combinations in **detergents**
SO Brit. UK Pat. Appl., 53 pp.
CODEN: BAXXDU
IN Elsmore, Richard; Houghton, Mark Phillip
AN 2001:578597 HCAPLUS
DN 135:124156

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001

L49 ANSWER 7 OF 27 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
TI Antimicrobial compositions comprising an oxidoreductase and prepn. of N-hydroxyanilide derivs. as enhancing agents.
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
IN Johansen, Charlotte; Deussen, Heinz-Josef
AN 2000:335182 HCAPLUS
DN 132:330857

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027204	A1	20000518	WO 1999-DK609	19991109
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 9915155	A	20010807	BR 1999-15155	19991109
EP 1128730	A1	20010905	EP 1999-953735	19991109
EP 1128730	B1	20030502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002094331	A1	20020718	US 1999-437106	19991109

JP 2002529380 T2 20020910 JP 2000-580452 19991109

L49 ANSWER 8 OF 27 WPIDS (C) 2003 THOMSON DERWENT
TI Hand dishwashing composition comprises alkylarylsulfonate, dishwashing adjunct and divalent ion.
PI WO 2000043476 A2 20000727 (200046)* EN 111p C11D001-00
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: BR CN CZ JP MX RU US
EP 1144573 A2 20011017 (200169) EN C11D001-22
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
BR 9916941 A 20011204 (200203) C11D001-00
CZ 2001002575 A3 20020717 (200260) C11D001-00
CN 1361815 A 20020731 (200279) C11D001-22
JP 2002535441 W 20021022 (200301) 135p C11D001-22
IN BURCKETT-ST LAURENT, J C T R; CONNOR, D S; CRIPE, T A; KASTURI, C; KOTT, K L; SCHEIBEL, J J; SCHERER, W M; VINSON, P K

L49 ANSWER 9 OF 27 WPIDS (C) 2003 THOMSON DERWENT
TI Novel hybrid maize seed NP2029 (ATCC 203614), useful for maize plant breeding programs and characterized by tolerance to herbicides and resistance to insects.
PI US 6072110 A 20000606 (200035)* 14p A01H005-10
IN HENSON, A

L49 ANSWER 10 OF 27 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Cleaning and disinfecting surfaces contaminated with biofilms; enzyme preparation from fungus and use in biofilm removal
AU Johansen C
AN 1998-08936 BIOTECHDS
PI WO 9826807 25 Jun 1998

L49 ANSWER 11 OF 27 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
TI Synergistic antimicrobial enzymic **peroxidase** compositions
SO PCT Int. Appl., 75 pp.
CODEN: PIXXD2
IN Johansen, Charlotte
AN 1997:752814 HCAPLUS
DN 128:19713

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9742825	A1	19971120	WO 1997-DK205	19970506
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9726933	A1	19971205	AU 1997-26933	19970506
EP 912097	A1	19990506	EP 1997-920611	19970506
EP 912097	B1	20020807		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
JP 2000512267	T2	20000919	JP 1997-540399	19970506
AT 221729	E	20020815	AT 1997-920611	19970506
US 2002119136	A1	20020829	US 2001-815848	20010323

L49 ANSWER 12 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Synergistic microbicides, especially for **laundry detergents**, comprising a polycationic compound and an enzyme
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
IN Johansen, Charlotte
AN 1997:617942 HCAPLUS

DN 127:244285

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9732480	A1	19970912	WO 1997-DK98	19970305
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2248065	AA	19970912	CA 1997-2248065	19970305
AU 9720912	A1	19970922	AU 1997-20912	19970305
EP 884950	A1	19981223	EP 1997-906093	19970305
EP 884950	B1	20030312		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
CN 1215310	A	19990428	CN 1997-193670	19970305
BR 9707836	A	19990727	BR 1997-7836	19970305
JP 2000506845	T2	20000606	JP 1997-531368	19970305
AT 234012	E	20030315	AT 1997-906093	19970305
US 6287585	B1	20010911	US 1998-143622	19980828

L49 ANSWER 13 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Bacterial polyphenol **oxidase** from Bacillus for use in oxidation of colored substances
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
IN Echigo, Takashi; Ohno, Ritsuko
AN 1997:536906 HCAPLUS
DN 127:187501

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9728257	A1	19970807	WO 1997-DK38	19970129
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
JP 09206071	A2	19970812	JP 1996-12977	19960129
AU 9714382	A1	19970822	AU 1997-14382	19970129
EP 877800	A1	19981118	EP 1997-900945	19970129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
CN 1209839	A	19990303	CN 1997-191942	19970129
US 6184014	B1	20010206	US 1998-110960	19980707

L49 ANSWER 14 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI A basic protein composition for **killing** or **inhibiting** **microbial** cells
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
IN Johansen, Charlotte
AN 1996:323681 HCAPLUS
DN 124:335652

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9606532	A1	19960307	WO 1995-DK351	19950901
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM				

RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9533419	A1	19960322	AU 1995-33419	19950901
EP 778733	A1	19970618	EP 1995-929788	19950901
EP 778733	B1	20001220		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE

JP 10505592	T2	19980602	JP 1995-508427	19950901
AT 198119	E	20010115	AT 1995-929788	19950901
ES 2154344	T3	20010401	ES 1995-929788	19950901

L49 ANSWER 15 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Preparation of quick diagnostic reagent kit for gonorrhea
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 29 pp.
CODEN: CNXXEV
IN Xu, Jianxin
AN 2000:178486 HCAPLUS
DN 132:191411

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CN 1134552	A	19961030	CN 1995-111738	19950825

L49 ANSWER 16 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Viscous epidermal cleaner and disinfectant
SO U.S., 9 pp. Contg.-in-part of U.S. 5,227,161.
CODEN: USXXAM
IN Kessler, Jack H.
AN 1995:331197 HCAPLUS
DN 122:89496

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5370815	A	19941206	US 1993-59956	19930513
US 5227161	A	19930713	US 1991-681447	19910404

L49 ANSWER 17 OF 27 WPIDS (C) 2003 THOMSON DERWENT
TI Decolourisation of foodstuffs, esp fish roe - by treatment with hydrogen peroxide source and **peroxidase**.
PI RD 357011 A 19940110 (199408)* 3p A23L000-00

L49 ANSWER 18 OF 27 WPIDS (C) 2003 THOMSON DERWENT
TI Dye transfer inhibiting compsns. for use in **detergent** formulations - comprise a selected poly amine N-oxide-contg. polymer, e.g. poly(4-vinyl pyridine- N-oxide), and an enzyme, e.g. a cellulase or **peroxidase**.
PI EP 581751 A1 19940202 (199405)* EN 18p C11D003-00
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
WO 9402577 A1 19940203 (199406) EN 39p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
WO 9402579 A1 19940203 (199406) EN 28p C11D003-00
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
AU 9346543 A 19940214 (199425)
AU 9346582 A 19940214 (199425) C11D003-00
WO 9425555 A1 19941110 (199444) EN 31p C11D003-28
RW: OA
W: AU BB BG BR BY CA CN CZ FI GE HU JP KG KP KR KZ LK LV MD MG MN MW NO NZ PL RO RU SD SI SK TJ TT UA US UZ VN
TW 235308 A 19941201 (199507) C11D007-36
AU 9466363 A 19941121 (199508) C11D003-28
CN 1084211 A 19940323 (199525) C11D003-60
CN 1084212 A 19940323 (199525) C11D003-60

CN 1084213 A 19940323 (199525) C11D003-60
CN 1084214 A 19940323 (199525) C11D003-60
CN 1084215 A 19940323 (199525) C11D003-60
CN 1084561 A 19940330 (199526) C11D003-60
US 5458809 A 19951017 (199547) 11p C11D003-37
US 5458810 A 19951017 (199547) 11p C11D003-37
US 5460752 A 19951024 (199548) 9p C11D003-37
US 5470507 A 19951128 (199602) 9p C11D003-37
US 5560858 A 19961001 (199645) 8p C11D003-28
JP 08511037 W 19961119 (199708) 30p C11D003-37
JP 09501188 W 19970204 (199715) 39p C11D003-37
US 5633225 A 19970527 (199727) 8p C11D003-37
EP 581751 B1 19981209 (199902) EN C11D003-00
R: BE DE ES FR GB IT
BR 9306746 A 19981208 (199903) C11D003-00
DE 69322447 E 19990121 (199909) C11D003-00
ES 2125968 T3 19990316 (199918) C11D003-00
CA 2140289 C 19990720 (199948) EN C11D003-00
PH 30146 A 19970121 (199953)
MX 190414 B 19981125 (200043) C11D001-040
MX 190415 B 19981125 (200043) C11D001-040
MX 190416 B 19981125 (200043) C11D001-040
MX 190417 B 19981125 (200043) C11D001-040
MX 190418 B 19981125 (200043) C11D001-040
PH 31842 A 19990302 (200261)# C11D003-37

IN BUSCH, A; FREDJ, A; HARDY, F E; JOHNSTON, J P; MACCORQUODALE, F; THOEN, C A J K; WILLEY, D A; WILLEY, A D; LABEQUE, R; ABDENNACEUR, F J; THOEN, C A J; FREDERICK, E; MACORQUODALE, F K

L49 ANSWER 19 OF 27 WPIDS (C) 2003 THOMSON DERWENT

TI Dye transfer inhibiting compsns., pref. **detergent** additive - for preventing transfer of dye from coloured fabric during washing, contains poly amine N-oxide polymer cpd..

PI EP 579295 A1 19940119 (199403)* EN 17p C11D003-00
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
WO 9402576 A1 19940203 (199406) EN 33p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
WO 9402577 A1 19940203 (199406) EN 39p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
WO 9402578 A1 19940203 (199406) 55p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
WO 9402579 A1 19940203 (199406) EN 28p C11D003-00
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK MG MN MW NO NZ PL RO RU SD SK UA US VN
AU 9346542 A 19940214 (199425)
AU 9346543 A 19940214 (199425)
AU 9346581 A 19940214 (199425)
AU 9346582 A 19940214 (199425) C11D003-00
TW 235308 A 19941201 (199507) C11D007-36
CN 1084211 A 19940323 (199525) C11D003-60
CN 1084212 A 19940323 (199525) C11D003-60
CN 1084213 A 19940323 (199525) C11D003-60
CN 1084214 A 19940323 (199525) C11D003-60
CN 1084215 A 19940323 (199525) C11D003-60
CN 1084561 A 19940330 (199526) C11D003-60
US 5458809 A 19951017 (199547) 11p C11D003-37
US 5458810 A 19951017 (199547) 11p C11D003-37

	US 5460752	A	19951024 (199548)		9p	C11D003-37
	US 5470507	A	19951128 (199602)		9p	C11D003-37
	EP 579295	B1	19981028 (199847)	EN		C11D003-00
	R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE					
	DE 69321778	E	19981203 (199903)			C11D003-00
	ES 2125299	T3	19990301 (199916)			C11D003-00
	CA 2140289	C	19990720 (199948)	EN		C11D003-00
	PH 29955	A	19960916 (199951)			C11D003-37
	CA 2140287	C	19990921 (200005)	EN		C11D003-00
	MX 190414	B	19981125 (200043)			C11D001-040
	MX 190415	B	19981125 (200043)			C11D001-040
	MX 190416	B	19981125 (200043)			C11D001-040
	MX 190417	B	19981125 (200043)			C11D001-040
	MX 190418	B	19981125 (200043)			C11D001-040

IN BUSCH, A; FREDJ, A; HARDY, F E; JOHNSTON, J P; MACCORQUODALE, F; THOEN, C A J K; WILLEY, D A; THOEN, C A J; WILLEY, A D; MACCORQUEDALE, F; LABEQUE, R; ABDENNACEUR, F J

L49 ANSWER 20 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Determination of contaminants on surfaces after rinsing with water
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
IN Lindsay, Alexander D.; Omilinsky, Barry A.
AN 1992:587846 HCAPLUS
DN 117:187846

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9215014	A1	19920903	WO 1992-US1184	19920218
W: AU, CA				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2104222	AA	19920816	CA 1992-2104222	19920218
AU 9214142	A1	19920915	AU 1992-14142	19920218
EP 639274	A1	19950222	EP 1992-906811	19920218
EP 639274	B1	19980812		
R: BE, DE, ES, FR, GB, GR, IT, NL				
ES 2121011	T3	19981116	ES 1992-906811	19920218
US 5504014	A	19960402	US 1993-90632	19930712

L49 ANSWER 21 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Immunoenzymometric assay (IEMA) for immunochemical determination of glycogen isophosphorylase BB (GP-BB) and methods for preparation and use of the IEMA
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
IN Noll, Franz; Handschack, Wilhelm; Loester, Clemens; Hofmann, Ute; Rabitzsch, Georg; Krause, Ernst Georg
AN 1992:210221 HCAPLUS
DN 116:210221

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4104128	A1	19920312	DE 1991-4104128	19910212
DD 299142	A7	19920402	DD 1990-342372	19900701

L49 ANSWER 22 OF 27 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI EFFECTS OF THE SPERMICIDAL AGENT NONOXYNOL-9 ON VAGINAL MICROBIAL FLORA.
SO J INFECT DIS, (1992) 165 (1), 19-25.
CODEN: JIDIAQ. ISSN: 0022-1899.
AU KLEBANOFF S J
AN 1992:100541 BIOSIS

L49 ANSWER 23 OF 27 WPIDS (C) 2003 THOMSON DERWENT
TI Immuno-histochemical staining esp. of tissue sections - using improved rinse, proteolytic enzyme, antibody diluent and **peroxidase** chromophore solns..

PI WO 9113336 A 19910905 (199138)* 47p
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: CA JP US
EP 517818 A1 19921216 (199251) EN 47p G01N001-28
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
US 5225325 A 19930706 (199328) 11p C12Q001-68
JP 05505239 W 19930805 (199336) 16p G01N001-30
US 5322771 A 19940621 (199424)# 12p C12N009-96
US 5418138 A 19950523 (199526) G01N033-535
EP 517818 A4 19950322 (199612)
CA 2077451 C 19960618 (199636) C12N009-50
JP 2966522 B2 19991025 (199950) 15p G01N033-48
JP 2000046827 A 20000218 (200020) 16p G01N033-53
EP 1030178 A1 20000823 (200041) EN G01N033-531
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 3168195 B2 20010521 (200130) 15p G01N033-53
JP 2001231552 A 20010828 (200157) 16p C12N009-96
EP 517818 B1 20020508 (200231) EN G01N001-28
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 69133006 E 20020613 (200246) G01N001-28
EP 517818 B9 20030108 (200304) EN G01N001-28
R: AT CH DE ES FR GB IT LI
ES 2177521 T3 20021216 (200306) G01N001-28
IN DEGROFF, M J; GIZINSKI, M J; HARTMAN, A L; MILLER, P C; RYBSKI, J A; VANDIVORT, P S

L49 ANSWER 24 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI **Detergent** inhibition of nitric-oxide reductase activity
SO Biochimica et Biophysica Acta (1987), 911(3), 334-40
CODEN: BBACAQ; ISSN: 0006-3002
AU Shapleigh, J. P.; Davies, K. J. P.; Payne, W. J.
AN 1987:191701 HCAPLUS
DN 106:191701

L49 ANSWER 25 OF 27 MEDLINE DUPLICATE 6
TI Sea urchin sperm **peroxidase** is competitively inhibited by benzohydroxamic acid and phenylhydrazine.
SO BIOCHEMISTRY AND CELL BIOLOGY, (1986 Dec) 64 (12) 1333-8.
Journal code: 8606068. ISSN: 0829-8211.
AU Schuel H; Schuel R
AN 87184984 MEDLINE

L49 ANSWER 26 OF 27 HCAPLUS COPYRIGHT 2003 ACS
TI Utility of the Topliss schemes for analog synthesis
SO Journal of Medicinal Chemistry (1973), 16(5), 578-9
CODEN: JMCMAR; ISSN: 0022-2623
AU Martin, Yvonne C.; Dunn, William J., III
AN 1973:461401 HCAPLUS
DN 79:61401

L49 ANSWER 27 OF 27 NTIS COPYRIGHT 2003 NTIS
TI Sterol Side Chain Cleavage by 'Mycobacterium': Characterization, Optimization and Genetics. Doctoral thesis.
Sterol Side Chain Cleavage by 'Mycobacterium': Characterization, Optimization and Genetics--Translation.
NR PB90-201377/XAB; ISBN-90-9002632-0
180p; c1988
AU Hesselink, P. G. M.
AN 1990(16):07204 NTIS

=> d ab 14

L49 ANSWER 14 OF 27 HCAPLUS COPYRIGHT 2003 ACS

AB A compn. consisting essentially of a basic protein or peptide capable of **killing microbial** cell, e.g. a protamine or protamine sulfate, in combination with a cell-wall degrading enzyme and/or an oxidoreductase, e.g. an endoglycosidase Type II, a lysozyme, chitinase, **peroxidase** enzyme system (EC 1.11.1.7) or laccase enzyme (EC 1.10.3.2), has bacteriostatic, fungicidal and/or fungistatic properties and is useful in **detergent** and hard surface cleaning compns. and in methods for **killing microbial** cells present on a hard surface, for **killing microbial** cells or **inhibiting** growing **microbial** cells present on **laundry**, for **killing microbial** cells present on human or animal skin, mucous membranes, wounds, bruises or in the eye; and in preservation of food, beverages, cosmetics, contact lens products, food ingredients or enzyme compns.

=> d ab 18-20

L49 ANSWER 18 OF 27 WPIDS (C) 2003 THOMSON DERWENT
AB EP 581751 A UPAB: 20020924
A dye transfer inhibiting compsn. comprises: (a) a polymer selected from polyamine N-oxide contg. polymers which contain units having structure formula P-Ax-R (I), P = polymerisable unit, to which the N-O gp. can be attached to or in which the N-O gp. forms part of the polymerisable unit; A = NC(O), C(O)O, C(O) O, S, or N; x = 0 or 1; and R = aliphatic (ethoxylated) aliphatic, aromatic, heterocyclic or alicyclic gps. whereto the N of the N-O gp. can be attached or where the N of the N-O gp. is part of these gps; and (b) an enzyme.

Pref. in the polymer, where the N-O gp. is attached to P or forms part of P, and the N of the N-O gp. forms part of R, R B pref. pyridine, pyrrole, imidazole or a deriv. of these, where the N of the N-O gp. is attached to R, R is pref. phenyl. The polymer has an ave. molecular wt. of 500-1,000,000 pref. 3,000-20,000. The ratio of amine: amine N-oxide is 2:3-1:1,000,000 pref. 1:7-1:1,000,000. A pref. polyamine N-oxide contg. polymer is poly(4-vinylpyridine-N-oxide). the enzyme is pref. selected from cellulases, **peroxidases**, lipases, amylases and mixts. of these; a cellulase and/or a **peroxidase** are pref. The polyamine N-oxide is present at levels of 0.001-10 wt.% of the compsn.

USE/ADVANTAGE - The compsn. is an adjunct **detergent** ingredient (claimed), which inhibits the transfer of dyes from coloured fabrics onto other fabrics during laundering, operations. The **detergent** further comprises surfactants, builders, etc. The polyamine N-oxide, contg. polymers provide a stabilising effect for enzymes formulated in **detergent** compsns; the dye transfer inhibiting performance of the polyamine N-oxide polymers is enhanced by the addn. of certain enzymes.
Dwg.0/0

L49 ANSWER 19 OF 27 WPIDS (C) 2003 THOMSON DERWENT
AB EP 579295 A UPAB: 20000907
Dye transfer inhibiting compsn. contains a polyamine N-oxide polymer contg. units of formula P-Ax-R (a): P = polymerisable units to which the N-O gp. may be attached or where the N-O gp. can form part of the unit; A = NCO, COO, CO, O, S or N; x = 0 or 1; R = aliphatic, ethoxylated aliphatic, aromatic, heterocyclic or alicyclic gp., to which the N of the N-O gp. can be attached or where the N of the N-O gp. can be part of the gp. R. Pref. (i) P = unit to which the N-O is attached or of which the N-O gp. forms a part (both pref. in the R gp.); R = aromatic or heterocyclic gp., pref. pyridine, pyrrole, quinoline, acridine, imidazole or a deriv.; or (ii) P = unit in which the N of N-O is attached to the R gp.; R = phenyl. (I) has a polyvinyl polymer backbone.

USE/ADVANTAGE - (I) efficiently inhibit transfer of solubilised or suspended dyes, released during laundering of coloured fabrics, onto other fabrics being washed simultaneously. The compsn. is specifically a

detergent additive, in liq. or non-dusting granule form. **Detergent** compsns. contg. (I), together with surfactants, builders, enzymes and other conventional ingredients, are claimed. Dwg.0/0

L49 ANSWER 20 OF 27 HCAPLUS COPYRIGHT 2003 ACS

AB The amt. of a contaminating hazardous chem. remaining on a surface (e.g. the inside of a container to be disposed of) after rinsing with water involves tagging the compn. contg. the hazardous chem. with a predetd. amt. of a surfactant, analyzing the rinsate for the surfactant, and calcg. therefrom the amt. of the hazardous chem. remaining. The surfactant may a nonionic alkaryl polyether alc., and may be detd. by immunoassay. Thus, a crop-protection formulation contained alachlor 44.0, petroleum distillate 20.0, emulsifier 5.0, octylphenoxypolyethylene oxide (I) (marker) 1.0, and monochlorobenzene 30.0%. The used container for the compn. was rinsed with water 4 times, and the 4th rinsate was mixed with **peroxidase** -I conjugate and tetramethylbenzidine (chromogen) and incubated in a tube coated with monoclonal antibody to I. Color developed in tubes lacking I, but not in tubes contg. unacceptable levels of I.

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=> s l12 not 1998-2000/py
FILE 'MEDLINE'
       1385066 1998-2000/PY
L50         320 L1 NOT 1998-2000/PY

FILE 'SCISEARCH'
       2912507 1998-2000/PY
L51         177 L2 NOT 1998-2000/PY

FILE 'LIFESCI'
        334901 1998-2000/PY
L52         102 L3 NOT 1998-2000/PY

FILE 'BIOTECHDS'
         42740 1998-2000/PY
L53          33 L4 NOT 1998-2000/PY

FILE 'BIOSIS'
       1690037 1998-2000/PY
L54         334 L5 NOT 1998-2000/PY

FILE 'EMBASE'
       1302508 1998-2000/PY
L55         202 L6 NOT 1998-2000/PY

FILE 'HCAPLUS'
       2674557 1998-2000/PY
L56         525 L7 NOT 1998-2000/PY

FILE 'NTIS'
         73830 1998-2000/PY
L57           6 L8 NOT 1998-2000/PY

FILE 'ESBIOBASE'
        853099 1998-2000/PY
L58          68 L9 NOT 1998-2000/PY

FILE 'BIOTECHNO'
        355339 1998-2000/PY
L59          86 L10 NOT 1998-2000/PY

FILE 'WPIDS'
       2478742 1998-2000/PY
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L60         31 L11 NOT 1998-2000/PY

TOTAL FOR ALL FILES
L61       1884 L12 NOT 1998-2000/PY

=> s l61 not 2001-2003/py
FILE 'MEDLINE'
       1216574 2001-2003/PY
L62        272 L50 NOT 2001-2003/PY

FILE 'SCISEARCH'
       2222625 2001-2003/PY
L63        115 L51 NOT 2001-2003/PY

FILE 'LIFESCI'
        213594 2001-2003/PY
L64         82 L52 NOT 2001-2003/PY

FILE 'BIOTECHDS'
         43156 2001-2003/PY
L65         20 L53 NOT 2001-2003/PY

FILE 'BIOSIS'
       1174215 2001-2003/PY
L66        284 L54 NOT 2001-2003/PY

FILE 'EMBASE'
       1006629 2001-2003/PY
L67        166 L55 NOT 2001-2003/PY

FILE 'HCAPLUS'
       2341185 2001-2003/PY
L68        444 L56 NOT 2001-2003/PY

FILE 'NTIS'
         31926 2001-2003/PY
L69          6 L57 NOT 2001-2003/PY

FILE 'ESBIOBASE'
        649946 2001-2003/PY
L70         38 L58 NOT 2001-2003/PY

FILE 'BIOTECHNO'
        262166 2001-2003/PY
L71         71 L59 NOT 2001-2003/PY

FILE 'WPIDS'
       2172577 2001-2003/PY
L72         13 L60 NOT 2001-2003/PY

TOTAL FOR ALL FILES
L73       1511 L61 NOT 2001-2003/PY

=> s l73 and peroxidase#
FILE 'MEDLINE'
         59225 PEROXIDASE#
L74        165 L62 AND PEROXIDASE#

FILE 'SCISEARCH'
         44100 PEROXIDASE#
L75         35 L63 AND PEROXIDASE#

FILE 'LIFESCI'
         14070 PEROXIDASE#
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L76         26 L64 AND PEROXIDASE#

FILE 'BIOTECHDS'
          3624 PEROXIDASE#
L77          3 L65 AND PEROXIDASE#

FILE 'BIOSIS'
         71038 PEROXIDASE#
L78        147 L66 AND PEROXIDASE#

FILE 'EMBASE'
         45705 PEROXIDASE#
L79         65 L67 AND PEROXIDASE#

FILE 'HCAPLUS'
         66758 PEROXIDASE#
L80        165 L68 AND PEROXIDASE#

FILE 'NTIS'
           450 PEROXIDASE#
L81          1 L69 AND PEROXIDASE#

FILE 'ESBIOBASE'
         13125 PEROXIDASE#
L82         15 L70 AND PEROXIDASE#

FILE 'BIOTECHNO'
         12588 PEROXIDASE#
L83         31 L71 AND PEROXIDASE#

FILE 'WPIDS'
          4010 PEROXIDASE#
L84         10 L72 AND PEROXIDASE#

TOTAL FOR ALL FILES
L85        663 L73 AND PEROXIDASE#

=> dup rem l85
PROCESSING COMPLETED FOR L85
L86         391 DUP REM L85 (272 DUPLICATES REMOVED)

=> s l85 and peroxide
FILE 'MEDLINE'
         30785 PEROXIDE
L87         60 L74 AND PEROXIDE

FILE 'SCISEARCH'
         47366 PEROXIDE
L88         13 L75 AND PEROXIDE

FILE 'LIFESCI'
          7188 PEROXIDE
L89         10 L76 AND PEROXIDE

FILE 'BIOTECHDS'
          2090 PEROXIDE
L90          1 L77 AND PEROXIDE

FILE 'BIOSIS'
         35325 PEROXIDE
L91         31 L78 AND PEROXIDE

FILE 'EMBASE'
         33490 PEROXIDE
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L92         23 L79 AND PEROXIDE

FILE 'HCAPLUS'
       170750 PEROXIDE
L93         68 L80 AND PEROXIDE

FILE 'NTIS'
         2550 PEROXIDE
L94          0 L81 AND PEROXIDE

FILE 'ESBIOBASE'
         9857 PEROXIDE
L95          6 L82 AND PEROXIDE

FILE 'BIOTECHNO'
         9760 PEROXIDE
L96         14 L83 AND PEROXIDE

FILE 'WPIDS'
        48209 PEROXIDE
L97          6 L84 AND PEROXIDE

TOTAL FOR ALL FILES
L98        232 L85 AND PEROXIDE

=> dup rem l98
PROCESSING COMPLETED FOR L98
L99         141 DUP REM L98 (91 DUPLICATES REMOVED)

=> d tot

L99  ANSWER 1 OF 141  HCAPLUS  COPYRIGHT 2003 ACS
TI   Preparation of guaiacol derivatives as bactericides, fungicides,
     and inflammation inhibitors
SO   Jpn. Kokai Tokkyo Koho, 6 pp.
     CODEN: JKXXAF
IN   Kobayashi, Akio; Hiraki, Masahiro; Baba, Takeshi; Kajiyama, Shinichiro;
     Kanzaki, Masahiro; Kawazu, Kazuyoshi
AN   1997:580684  HCAPLUS
DN   127:176260
     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     --------------    ----  --------      --------------    --------
PI   JP 09176075        A2   19970708      JP 1995-342924    19951228

L99  ANSWER 2 OF 141  HCAPLUS  COPYRIGHT 2003 ACS
TI   Eugenol and isoeugenol dimers as bactericides, fungicides, and
     inflammation inhibitors
SO   Jpn. Kokai Tokkyo Koho, 8 pp.
     CODEN: JKXXAF
IN   Kobayashi, Akio; Baba, Takeshi; Kajiyama, Shinichiro; Kanzaki, Masahiro;
     Kawazu, Kazuyoshi
AN   1997:580683  HCAPLUS
DN   127:176259
     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     --------------    ----  --------      --------------    --------
PI   JP 09176074        A2   19970708      JP 1995-342914    19951228

L99  ANSWER 3 OF 141  WPIDS (C) 2003 THOMSON DERWENT
TI   Treatment of mammalian eye to disinfect it - uses
     microbiocide composition, also for disinfection of e.g.
     cell lines and blood plasma.
PI   US 5639481    A  19970617 (199730)*       7p    A01N059-22
IN   KESSLER, J H; RICHARDS, J C
```

L99 ANSWER 4 OF 141 MEDLINE DUPLICATE 1
TI Reactive liposomes encapsulating a glucose **oxidase-peroxidase** system with antibacterial activity.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1997 May 22) 1326 (1) 37-46.
Journal code: 0217513. ISSN: 0006-3002.
AU Hill K J; Kaszuba M; Creeth J E; Jones M N
AN 97332564 MEDLINE

L99 ANSWER 5 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 2
TI Use of sulfite and hydrogen **peroxide** to control bacterial contamination in ethanol fermentation
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (JAN 1997) Vol. 63, No. 1, pp. 1-6.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0099-2240.
AU Chang I S; Kim B H (Reprint); Shin P K
AN 97:35170 SCISEARCH

L99 ANSWER 6 OF 141 MEDLINE
TI Role of oxidants in microbial pathophysiology.
SO CLINICAL MICROBIOLOGY REVIEWS, (1997 Jan) 10 (1) 1-18. Ref: 334
Journal code: 8807282. ISSN: 0893-8512.
AU Miller R A; Britigan B E
AN 97147000 MEDLINE

L99 ANSWER 7 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Disinfection of contact lenses using superoxide
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
IN Hunt, Terrence J.
AN 1996:541208 HCAPLUS
DN 125:177499

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9620736	A1	19960711	WO 1995-US15989	19951211
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9645124	A1	19960724	AU 1996-45124	19951211

L99 ANSWER 8 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Preparation of quick diagnostic reagent kit for gonorrhea
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 29 pp.
CODEN: CNXXEV
IN Xu, Jianxin
AN 2000:178486 HCAPLUS
DN 132:191411

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1134552	A	19961030	CN 1995-111738	19950825

L99 ANSWER 9 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI Inhibition of programmed cell death in tobacco plants during a pathogen-induced hypersensitive response at low oxygen pressure
SO PLANT CELL, (NOV 1996) Vol. 8, No. 11, pp. 1991-2001.
Publisher: AMER SOC PLANT PHYSIOLOGISTS, 15501 MONONA DRIVE, ROCKVILLE, MD 20855.
ISSN: 1040-4651.
AU Mittler R; Shulaev V; Seskar M; Lam E (Reprint)
AN 96:910294 SCISEARCH

L99 ANSWER 10 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 3
TI Antibacterial effects of hydrogen **peroxide** and methods for its detection and quantitation

SO JOURNAL OF FOOD PROTECTION, (NOV 1996) Vol. 59, No. 11, pp. 1233-1241.
Publisher: INT ASSOC MILK FOOD ENVIRONMENTAL SANITARIANS, INC, 6200 AURORA AVE SUITE 200W, DES MOINES, IA 50322-2838.
ISSN: 0362-028X.
AU Juven B J (Reprint); Pierson M D
AN 96:907228 SCISEARCH

L99 ANSWER 11 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI ENDOTOXIN STIMULATES GENE-EXPRESSION OF ROS-ELIMINATING PATHWAYS IN RAT HEPATIC ENDOTHELIAL AND KUPFFER CELLS
SO AMERICAN JOURNAL OF PHYSIOLOGY-GASTROINTESTINAL AND LIVER PHYSIOLOGY, (APR 1996) Vol. 33, No. 4, pp. G660-G666.
ISSN: 0193-1857.
AU SPOLARICS Z (Reprint)
AN 96:304683 SCISEARCH

L99 ANSWER 12 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Endotoxin stimulates gene expression of ROS-eliminating pathways in rat hepatic endothelial and Kupffer cells.
SO American Journal of Physiology, (1996) Vol. 270, No. 4 PART 1, pp. G660-G666.
ISSN: 0002-9513.
AU Spolarics, Zoltan
AN 1996:284989 BIOSIS

L99 ANSWER 13 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 4
TI A lactate **oxidase** salivary **peroxidase** thiocyanate antibacterial enzyme system
SO MICROBIAL ECOLOGY IN HEALTH AND DISEASE, (NOV-DEC 1996) Vol. 9, No. 6, pp. 321-328.
Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX, ENGLAND PO19 1UD.
ISSN: 0891-060X.
AU Hayes M L (Reprint)
AN 97:369840 SCISEARCH

L99 ANSWER 14 OF 141 MEDLINE
TI Binding of myeloperoxidase to bacteria: effect on hydroxyl radical formation and susceptibility to oxidant-mediated killing.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1996 Aug 13) 1290 (3) 231-40.
Journal code: 0217513. ISSN: 0006-3002.
AU Britigan B E; Ratcliffe H R; Buettner G R; Rosen G M
AN 96350433 MEDLINE

L99 ANSWER 15 OF 141 MEDLINE DUPLICATE 5
TI Bactericidal activity against Pseudomonas aeruginosa is acquired by cultured human monocyte-derived macrophages after uptake of myeloperoxidase.
SO EXPERIENTIA, (1996 Feb 15) 52 (2) 167-74.
Journal code: 0376547. ISSN: 0014-4754.
AU Mathy-Hartert M; Deby-Dupont G; Melin P; Lamy M; Deby C
AN 96182562 MEDLINE

L99 ANSWER 16 OF 141 MEDLINE
TI Inhibition of neutrophil function by human milk.
SO CELLULAR IMMUNOLOGY, (1996 Mar 15) 168 (2) 125-32.
Journal code: 1246405. ISSN: 0008-8749.
AU Grazioso C F; Buescher E S
AN 96228267 MEDLINE

L99 ANSWER 17 OF 141 MEDLINE DUPLICATE 6
TI Susceptibility of mice to bacterial and fungal infections after intragastric administration of ebselen.
SO JOURNAL OF PHARMACY AND PHARMACOLOGY, (1996 Jan) 48 (1) 64-7.

Journal code: 0376363. ISSN: 0022-3573.
AU Nozawa R; Arai M; Kuruto R; Motohashi T; Masayasu H
AN 96301496 MEDLINE

L99 ANSWER 18 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Potential role of the **peroxidase**-dependent metabolism of serotonin in lowering the polymorphonuclear leukocyte bactericidal function
SO Free Radical Research (1996), 24(1), 61-68
CODEN: FRARER; ISSN: 1071-5762
AU Salman-Tabcheh, Saida; Guerin, Marie-Christine; Torreilles, Jean
AN 1996:671713 HCAPLUS
DN 125:318432

L99 ANSWER 19 OF 141 MEDLINE
TI Casein effects on the myeloperoxidase-mediated oxygen-dependent bactericidal activity of bovine neutrophils.
SO VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, (1996 May) 51 (1-2) 55-65.
Journal code: 8002006. ISSN: 0165-2427.
AU Cooray R
AN 96390197 MEDLINE

L99 ANSWER 20 OF 141 LIFESCI COPYRIGHT 2003 CSA
TI Method which utilizes a haloperoxidase composition to inhibit the growth of microorganisms which cause sexually transmitted diseases
SO (19961015) . US Patent 5565197; US Cl. 424/94.4 424/94.1 435/189 435/192.
AN 1998:2707 LIFESCI

L99 ANSWER 21 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Method for inactivating pathogens using reaction products of immobilized **peroxidase**
SO U.S., 7 pp.
CODEN: USXXAM
IN Kessler, Jack
AN 1995:661092 HCAPLUS
DN 123:47892

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5419902	A	19950530	US 1993-92605	19930716
	EP 745327	A1	19961204	EP 1995-108235	19950529
	R: DE, ES, FR, GB, IT, SE				
	JP 08322915	A2	19961210	JP 1995-130861	19950529

L99 ANSWER 22 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Manufacture of antibacterial and antifungal substances from syringaldehyde with **peroxidase** and antibacterial and antifungal agents containing the substances
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
IN Kobayashi, Akio; Oguchi, Yasushi; Kanzaki, Hiroshi; Kajama, Shinichiro; Kawazu, Kazuyoshi
AN 1995:604351 HCAPLUS
DN 123:8036

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07076547	A2	19950320	JP 1993-223415	19930908

L99 ANSWER 23 OF 141 WPIDS (C) 2003 THOMSON DERWENT
TI Enzymatic antimicrobial compsn, esp. disinfectant - contg. vanadium halo **peroxidase**, esp. from Curvularia inaequalis, halide and hydrogen **peroxide** source.
PI WO 9527046 A2 19951012 (199546)* EN 48p C12N009-08
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ UG
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE

KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NL NO NZ PL PT RO RU SD
SE SG SI SK TJ TM TT UA UG US UZ VN

AU 9522154	A	19951023	(199605)			C12N009-08
WO 9527046	A3	19951130	(199621)			C09D005-14
EP 753055	A1	19970115	(199708)	EN		C12N009-08
R: CH DE ES FR GB IT LI NL SE						
SK 9601230	A3	19970604	(199733)			C12N015-53
CZ 9602850	A3	19971015	(199748)			C12N009-08
HU 74967	T	19970328	(199750)			C12N009-08
BR 9507226	A	19970909	(199751)			C12N009-08
JP 09511396	W	19971118	(199805)		51p	C12N015-09
CN 1146782	A	19970402	(200108)			C12N015-53

IN BARNETT, P; HONDMANN, D H; SIMONS, L H; TER STEEG, P F; WEVER, R; STEEG, P F T; TER, S P F; HONDMANN, D H A; DEKKER, H L; VAN SCHIJNDEL, J W P M; VOLLENBROEK, E G M

L99 ANSWER 24 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 7
TI INHIBITION OF MYELOPEROXIDASE BY BENZOIC-ACID HYDRAZIDES
SO BIOCHEMICAL JOURNAL, (01 JUN 1995) Vol. 308, Part 2, pp. 559-563.
ISSN: 0264-6021.
AU KETTLE A J (Reprint); GEDYE C A; HAMPTON M B; WINTERBOURN C C
AN 95:398127 SCISEARCH

L99 ANSWER 25 OF 141 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 8
TI Relationship between activities of enzymes for the removal of O sub(2) super(-) and H sub(2)O sub(2)
SO J. BIOSCI., (1995) vol. 50, no. 7/8, pp. 543-551.
ISSN: 0939-5075.
AU Epping, B.; Hansen, A.P.; Martin, P.
AN 96:44001 LIFESCI

L99 ANSWER 26 OF 141 MEDLINE DUPLICATE 9
TI Bactericidal activity of the bovine myeloperoxidase system against bacteria associated with mastitis.
SO VETERINARY MICROBIOLOGY, (1995 Oct) 46 (4) 427-34.
Journal code: 7705469. ISSN: 0378-1135.
AU Cooray R; Bjorck L
AN 96124487 MEDLINE

L99 ANSWER 27 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISI
TI FACTORS **INHIBITING** AND STIMULATING **BACTERIAL**-GROWTH IN MILK - AN HISTORICAL-PERSPECTIVE
SO ADVANCES IN APPLIED MICROBIOLOGY, (1995) Vol. 40, pp. 45-94.
ISSN: 0065-2164.
AU OTOOLE D K (Reprint)
AN 95:569473 SCISEARCH

L99 ANSWER 28 OF 141 MEDLINE DUPLICATE 10
TI Apparent antibacterial activity of catalase: role of lipid hydroperoxide contamination.
SO JOURNAL OF BIOCHEMISTRY, (1995 Jan) 117 (1) 42-6.
Journal code: 0376600. ISSN: 0021-924X.
AU Kono Y
AN 95293932 MEDLINE

L99 ANSWER 29 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Treating of contact lenses with compositions comprising PVP-hydrogen **peroxide**
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
IN Salpekar, Anil M.
AN 1994:587377 HCAPLUS
DN 121:187377

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 9415648	A1	19940721	WO 1993-US12553	19931221
	W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5364601	A	19941115	US 1992-998507	19921230
	AU 9458746	A1	19940815	AU 1994-58746	19931221
	CN 1090129	A	19940803	CN 1993-121729	19931230

L99 ANSWER 30 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Viscous epidermal cleaner and disinfectant
SO U.S., 9 pp. Contg.-in-part of U.S. 5,227,161.
CODEN: USXXAM
IN Kessler, Jack H.
AN 1995:331197 HCAPLUS
DN 122:89496

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5370815	A	19941206	US 1993-59956	19930513
US 5227161	A	19930713	US 1991-681447	19910404

L99 ANSWER 31 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Pet chewable products with enzymic coating
SO U.S., 7 pp.
CODEN: USXXAM
IN Pellico, Michael A.
AN 1994:587342 HCAPLUS
DN 121:187342

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5336494	A	19940809	US 1993-10841	19930129
US 5453284	A	19950926	US 1994-283816	19940801

L99 ANSWER 32 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Manufacture of antibacterial and antifungal compounds by treatment of phenolic compounds with **peroxidase**, antibacterial and antifungal agents containing the compounds, and an active compound
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
IN Kobayashi, Akio; Oguchi, Yasushi; Kanzaki, Hiroshi; Kawazu, Kazuyoshi
AN 1995:220844 HCAPLUS
DN 122:54154

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06245779	A2	19940906	JP 1993-36892	19930225

L99 ANSWER 33 OF 141 WPIDS (C) 2003 THOMSON DERWENT
TI Decolourisation of foodstuffs, esp fish roe - by treatment with hydrogen **peroxide** source and **peroxidase**.
PI RD 357011 A 19940110 (199408)* 3p A23L000-00

L99 ANSWER 34 OF 141 MEDLINE
TI Superoxide-dependent hydroxylation by myeloperoxidase.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1994 Jun 24) 269 (25) 17146-51.
Journal code: 2985121R. ISSN: 0021-9258.
AU Kettle A J; Winterbourn C C
AN 94274706 MEDLINE

L99 ANSWER 35 OF 141 MEDLINE
TI Comparison of the sensitivities of Salmonella typhimurium oxyR and katG mutants to killing by human neutrophils.
SO INFECTION AND IMMUNITY, (1994 Jul) 62 (7) 2662-8.
Journal code: 0246127. ISSN: 0019-9567.

AU Papp-Szabo E; Firtel M; Josephy P D
AN 94274276 MEDLINE

L99 ANSWER 36 OF 141 MEDLINE
TI Cefdinir (CI-983), a new oral amino-2-thiazolyl cephalosporin, inhibits human neutrophil myeloperoxidase in the extracellular medium but not the phagolysosome.
SO JOURNAL OF IMMUNOLOGY, (1994 Mar 1) 152 (5) 2447-55.
Journal code: 2985117R. ISSN: 0022-1767.
AU Labro M T; el Benna J; Charlier N; Abdelghaffar H; Hakim J
AN 94179827 MEDLINE

L99 ANSWER 37 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Antimicrobial properties of ortho-ortho direct-linked phenolic oligomers
SO Bokin Bobai (1994), 22(1), 35-8
CODEN: BOBODP; ISSN: 0385-5201
AU Matsumura, Shuichi; Shiotani, Takatoshi; Asakura, Kouichi; Kawada, Kazuo; Uchibori, Tsuyoshi
AN 1994:404895 HCAPLUS
DN 121:4895

L99 ANSWER 38 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Synergistic antimicrobial compositions.
SO U.S., 6 pp.
CODEN: USXXAM
IN Good, Stephen R.; Byng, Graham S.
AN 1994:38223 HCAPLUS
DN 120:38223

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5250299	A	19931005	US 1991-763899	19910923

PI

L99 ANSWER 39 OF 141 MEDLINE DUPLICATE 11
TI Reactive nitrogen intermediates and antimicrobial activity: role of nitrite.
SO FREE RADICAL BIOLOGY AND MEDICINE, (1993 Apr) 14 (4) 351-60.
Journal code: 8709159. ISSN: 0891-5849.
AU Klebanoff S J
AN 93224063 MEDLINE

L99 ANSWER 40 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Organic-phase biosensors for monitoring phenol and hydrogen **peroxide** in pharmaceutical antibacterial products
SO Analyst (Cambridge, United Kingdom) (1993), 118(3), 277-80
CODEN: ANALAO; ISSN: 0003-2654
AU Wang, Joseph; Lin, Yuehe; Chen, Liang
AN 1993:246434 HCAPLUS
DN 118:246434

L99 ANSWER 41 OF 141 MEDLINE
TI Impairment of the oxygen-dependent microbicidal mechanisms of polymorphonuclear neutrophils in patients with type 2 diabetes is not associated with increased susceptibility to infection.
SO DIABETES RESEARCH AND CLINICAL PRACTICE, (1993 Mar) 19 (3) 195-201.
Journal code: 8508335. ISSN: 0168-8227.
AU Wykretowicz A; Wierusz-Wysocka B; Wysocki J; Szczepanik A; Wysocki H
AN 93307026 MEDLINE

L99 ANSWER 42 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Contact lens disinfecting compositions containing hydrogen **peroxide**
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
IN Park, John Y.; Cook, James N.; Anger, Claude B.

AN 1992:557710 HCAPLUS
DN 117:157710

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9211042	A1	19920709	WO 1991-US9330	19911216
W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MG, MW, NO, RO, SD, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
AU 9191584	A1	19920722	AU 1991-91584	19911216
EP 563250	A1	19931006	EP 1992-902991	19911216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06503251	T2	19940414	JP 1992-503172	19911216
US 5681591	A	19971028	US 1992-947087	19920917
US 5660862	A	19970826	US 1995-449442	19950524

L99 ANSWER 43 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Method for simultaneously cleaning and disinfecting contact lenses
SO U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 771,653.
CODEN: USXXAM
IN Kessler, Jack H.
AN 1993:132172 HCAPLUS
DN 118:132172

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5169455	A	19921208	US 1992-866904	19920410

L99 ANSWER 44 OF 141 MEDLINE
TI Photodamaging effects of merocyanine 540 on neutrophils and HL-60 cells.
SO EXPERIMENTAL HEMATOLOGY, (1992 Dec) 20 (11) 1278-84.
Journal code: 0402313. ISSN: 0301-472X.
AU Smith O M; Traul D L; Sieber F
AN 93154449 MEDLINE

L99 ANSWER 45 OF 141 MEDLINE DUPLICATE 12
TI Increased serum catalase activity in septic patients with the adult respiratory distress syndrome.
SO AMERICAN REVIEW OF RESPIRATORY DISEASE, (1992 Oct) 146 (4) 985-9.
Journal code: 0370523. ISSN: 0003-0805.
AU Leff J A; Parsons P E; Day C E; Moore E E; Moore F A; Oppegard M A; Repine J E
AN 93036793 MEDLINE

L99 ANSWER 46 OF 141 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Oxidative processes using hydrogen **peroxide** for the treatment of industrial toxic wastes by means of chemical enzymatic catalytic oxidations;
waste-water phenol degradation, formaldehyde degradation, etc. by hydrogen **peroxide** generated chemically or by **peroxidase** (conference paper)
SO Biotechnol.Livestock Developing Countries; (1992) 756-64
CODEN: 9999K
AU Alfieri M; Wlassics I; Visentin W
AN 1993-15483 BIOTECHDS

L99 ANSWER 47 OF 141 MEDLINE DUPLICATE 13
TI Lysozyme enhances the inhibitory effects of the **peroxidase** system on glucose metabolism of Streptococcus mutans.
SO JOURNAL OF DENTAL RESEARCH, (1992 Mar) 71 (3) 484-90.
Journal code: 0354343. ISSN: 0022-0345.
AU Lenander-Lumikari M; Mansson-Rahemtulla B; Rahemtulla F
AN 92242637 MEDLINE

L99 ANSWER 48 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI EFFECTS OF THE SPERMICIDAL AGENT NONOXYNOL-9 ON VAGINAL MICROBIAL FLORA.

SO J INFECT DIS, (1992) 165 (1), 19-25.
CODEN: JIDIAQ. ISSN: 0022-1899.
AU KLEBANOFF S J
AN 1992:100541 BIOSIS

L99 ANSWER 49 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Methods to control color during disinfecting **peroxidase** reactions
SO U.S., 15 pp. Cont.-in-part of U.S. Ser. No. 946,907, abandoned.
CODEN: USXXAM
IN Kessler, Jack H.
AN 1992:46376 HCAPLUS
DN 116:46376

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5055287	A	19911008	US 1988-151909	19880203

L99 ANSWER 50 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Synergistic antimicrobial compositions containing an antimicrobial polypeptide and a hypothiocyanate
SO U.S., 7 pp.
CODEN: USXXAM
IN Bycroft, Nancy L.; Byng, Graham S.; Good, Stephen R.
AN 1991:574642 HCAPLUS
DN 115:174642

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5043176	A	19910827	US 1990-537463	19900613
CA 2042107	AA	19911214	CA 1991-2042107	19910508
CA 2043463	AA	19911214	CA 1991-2043463	19910529
EP 461530	A2	19911218	EP 1991-109146	19910605
EP 461530	A3	19920603		
EP 461530	B1	19940316		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 102797	E	19940415	AT 1991-109146	19910605
ES 2062614	T3	19941216	ES 1991-109146	19910605
JP 04230205	A2	19920819	JP 1991-166465	19910611

L99 ANSWER 51 OF 141 LIFESCI COPYRIGHT 2003 CSA
TI In vitro studies of water activity and **bacterial** growth **inhibition** of sucrose-polyethylene glycol 400-hydrogen **peroxide** and xylose-polyethylene glycol 400-hydrogen **peroxide** pastes used to treat infected wounds.
SO ANTIMICROB. AGENTS CHEMOTHER., (1991) vol. 35, no. 9, pp. 1799-1803.
AU Ambrose, U.; Middleton, K.; Seal, D.
AN 91:36215 LIFESCI

L99 ANSWER 52 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI OXIDATIVE **KILLING** OF **BACTERIA** IS ENHANCED BY FLUORIDE.
SO 91ST GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, DALLAS, TEXAS, USA, MAY 5-9, 1991. ABSTR GEN MEET AM SOC MICROBIOL. (1991) 91 (0), 218.
CODEN: AGMME8.
AU MARQUIS R E; COWING L S; LASKARIS B G
AN 1991:401673 BIOSIS

L99 ANSWER 53 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Lactoperoxidase-catalyzed oxidation of thiocyanate by hydrogen **peroxide**: nitrogen-15 nuclear magnetic resonance and optical spectral studies
SO Biochemistry (1991), 30(1), 118-24
CODEN: BICHAW; ISSN: 0006-2960
AU Modi, Sandeep; Deodhar, Saudamini S.; Behere, Digamber V.; Mitra, Samaresh
AN 1991:19974 HCAPLUS

DN 114:19974

L99 ANSWER 54 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Combination enzyme immunotherapeutics using **peroxidases** and hydrogen **peroxide**-producing enzymes, conjugated to antibodies
SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
IN Nedwin, Glenn E.; Kohn, James A.
AN 1991:17551 HCAPLUS
DN 114:17551

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 361908	A2	19900404	EP 1989-309863	19890928
EP 361908	A3	19900905		
R: ES, GR				
WO 9003185	A1	19900405	WO 1989-US4262	19890928
W: AU, JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8944025	A1	19900418	AU 1989-44025	19890928

L99 ANSWER 55 OF 141 MEDLINE DUPLICATE 14
TI Preferential adsorption of human neutrophil myeloperoxidase isoform III by oral bacteria.
SO JOURNAL OF DENTAL RESEARCH, (1990 Nov) 69 (11) 1780-3.
Journal code: 0354343. ISSN: 0022-0345.
AU Miyasaki K T
AN 91036325 MEDLINE

L99 ANSWER 56 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Bactericidal properties of a titanium-peroxy gel obtained from metallic titanium and hydrogen **peroxide**
SO Journal of Biomedical Materials Research (1990), 24(3), 319-30
CODEN: JBMRBG; ISSN: 0021-9304
AU Tengvall, P.; Hoernsten, E. G.; Elwing, H.; Lundstroem, I.
AN 1990:455729 HCAPLUS
DN 113:55729

L99 ANSWER 57 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Bactericidal iodine-releasing compositions containing iodide, a **peroxidase**, and a **peroxide** donor
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
IN Knutsson, Maud Inger Christine
AN 1989:219119 HCAPLUS
DN 110:219119

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 307376	A1	19890315	EP 1988-850240	19880704
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
SE 8702831	A	19890111	SE 1987-2831	19870710
AU 8818719	A1	19890112	AU 1988-18719	19880705
FI 8803238	A	19890111	FI 1988-3238	19880706
DK 8803813	A	19890111	DK 1988-3813	19880708
NO 8803059	A	19890111	NO 1988-3059	19880708
JP 01061427	A2	19890308	JP 1988-171058	19880711

L99 ANSWER 58 OF 141 MEDLINE DUPLICATE 15
TI Oxygen-based free radical generation by ferrous ions and deferoxamine.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Nov 25) 264 (33) 19765-71.
Journal code: 2985121R. ISSN: 0021-9258.
AU Klebanoff S J; Waltersdorph A M; Michel B R; Rosen H
AN 90062078 MEDLINE

L99 ANSWER 59 OF 141 MEDLINE

TI Role of myeloperoxidase in the killing of Staphylococcus aureus by human neutrophils: studies with the myeloperoxidase inhibitor salicylhydroxamic acid.
SO JOURNAL OF GENERAL MICROBIOLOGY, (1989 May) 135 (Pt 5) 1187-93.
Journal code: 0375371. ISSN: 0022-1287.
AU Humphreys J M; Davies B; Hart C A; Edwards S W
AN 90155196 MEDLINE

L99 ANSWER 60 OF 141 MEDLINE
TI Candidacidal activity of the neutrophil myeloperoxidase system can be protected from excess hydrogen **peroxide** by the presence of ammonium ion.
SO BLOOD, (1989 Mar) 73 (4) 1045-9.
Journal code: 7603509. ISSN: 0006-4971.
AU Beilke M A; Collins-Lech C; Sohnle P G
AN 89150432 MEDLINE

L99 ANSWER 61 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Bactericides containing hydrogen **peroxide**-forming enzyme, **peroxidase**, lysozyme and thiocyanate for dentifrices and wound treatment
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
IN Poulsen, Otto Melchior
AN 1989:121413 HCAPLUS
DN 110:121413

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 8802600	A1	19880421	WO 1987-DK130	19871019
W: AU, FI, JP, NO, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
DK 8605016	A	19880421	DK 1986-5016	19861020
AU 8781750	A1	19880506	AU 1987-81750	19871019
EP 293407	A1	19881207	EP 1987-907213	19871019
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
JP 01501000	T2	19890406	JP 1987-506623	19871019
NO 8802708	A	19880819	NO 1988-2708	19880617
FI 8802947	A	19880620	FI 1988-2947	19880620

L99 ANSWER 62 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Purification and characterization of a novel bacterial non-heme chloroperoxidase from Pseudomonas pyrrocinia
SO Journal of Biological Chemistry (1988), 263(27), 13725-32
CODEN: JBCHA3; ISSN: 0021-9258
AU Wiesner, Wolfgang; Van Pee, Karl Heinz; Lingens, Franz
AN 1988:625398 HCAPLUS
DN 109:225398

L99 ANSWER 63 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Susceptibility of Plasmodium falciparum to a **peroxidase**-mediated oxygen-dependent microbicidal system
SO Infection and Immunity (1988), 56(12), 3305-9
CODEN: INFIBR; ISSN: 0019-9567
AU Malhotra, Khushbeer; Salmon, Dominique; Le Bras, Jacques; Vilde, Jean Louis
AN 1989:37633 HCAPLUS
DN 110:37633

L99 ANSWER 64 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI The **inhibition** of **bacterial** growth by hypochlorous acid. Possible role in the bactericidal activity of phagocytes
SO Biochemical Journal (1988), 254(3), 685-92
CODEN: BIJOAK; ISSN: 0306-3275
AU McKenna, Susan M.; Davies, Kelvin J. A.

AN 1988:547845 HCAPLUS
DN 109:147845

L99 ANSWER 65 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Antibacterial effect of the lactoperoxidase/thiocyanate/hydrogen **peroxide** (LP) system on the activity of thermophilic starter culture
SO Milchwissenschaft (1988), 43(6), 350-2
CODEN: MILCAD; ISSN: 0026-3788
AU De Valdez, G. F.; Bibi, W.; Bachmann, M. R.
AN 1988:548189 HCAPLUS
DN 109:148189

L99 ANSWER 66 OF 141 MEDLINE DUPLICATE 16
TI The bactericidal effects of the respiratory burst and the myeloperoxidase system isolated in neutrophil cytoplasts.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1988 Oct 7) 971 (3) 266-74.
Journal code: 0217513. ISSN: 0006-3002.
AU Odell E W; Segal A W
AN 89000894 MEDLINE

L99 ANSWER 67 OF 141 MEDLINE
TI Relationship of **bacterial** growth phase to **killing** of Listeria monocytogenes by oxidative agents generated by neutrophils and enzyme systems.
SO INFECTION AND IMMUNITY, (1987 Dec) 55 (12) 3197-203.
Journal code: 0246127. ISSN: 0019-9567.
AU Bortolussi R; Vandenbroucke-Grauls C M; van Asbeck B S; Verhoef J
AN 88057619 MEDLINE

L99 ANSWER 68 OF 141 MEDLINE
TI Oxygen radical generation by polymorphonuclear leucocytes of beige mice.
SO CLINICAL AND EXPERIMENTAL IMMUNOLOGY, (1987 Dec) 70 (3) 658-63.
Journal code: 0057202. ISSN: 0009-9104.
AU Kubo A; Sasada M; Nishimura T; Moriguchi T; Kakita T; Yamamoto K; Uchino H
AN 88136316 MEDLINE

L99 ANSWER 69 OF 141 MEDLINE
TI The bactericidal mechanisms of polymorphonuclear leukocytes against Bacteroides fragilis: significance of the oxygen-dependent system.
SO MICROBIOLOGY AND IMMUNOLOGY, (1987) 31 (4) 357-66.
Journal code: 7703966. ISSN: 0385-5600.
AU Nishimura T; Sasada M; Kubo A; Kakita T; Moriguchi T; Uchino H
AN 87286469 MEDLINE

L99 ANSWER 70 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Effect of the lactoperoxidase system on salmonellae and shigellae
SO Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (1987), (11), 99-103
CODEN: ZMEIAV; ISSN: 0372-9311
AU Denisova, I. I.; Vasser, N. R.; Bel'kova, E. I.; Velichko, L. N.; Gennad'eva, T. Ya.; Khazenson, L. B.
AN 1988:34722 HCAPLUS
DN 108:34722

L99 ANSWER 71 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Enzymic bandages and pads
SO U.S., 6 pp.
CODEN: USXXAM
IN Montgomery, Robert E.; Pellico, Michael A.
AN 1986:213322 HCAPLUS
DN 104:213322

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4576817	A	19860318	US 1984-618071	19840607

CA 1258228	A1	19890808	CA 1986-503881	19860312
EP 236610	A1	19870916	EP 1986-301800	19860313
R: DE, FR, GB, IT, SE				

L99 ANSWER 72 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI **Bactericides** for **disinfecting** a contact lens
SO Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
IN Kessler, Jack; Rosenbaum, Robert S.
AN 1986:230539 HCAPLUS
DN 104:230539

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 175801	A1	19860402	EP 1984-111380	19840924
EP 175801	B1	19920520		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
CA 1226114	A1	19870901	CA 1984-463726	19840921
AT 76307	E	19920615	AT 1984-111380	19840924

L99 ANSWER 73 OF 141 WPIDS (C) 2003 THOMSON DERWENT
TI Disinfection of contact lenses - with limited life bactericide comprising **peroxide**, **peroxidase**, and donor molecule source.
PI US 4588586 A 19860513 (198622)* 6p
IN ROSENBAUM, R S

L99 ANSWER 74 OF 141 MEDLINE DUPLICATE 17
TI Sea urchin sperm **peroxidase** is competitively inhibited by benzohydroxamic acid and phenylhydrazine.
SO BIOCHEMISTRY AND CELL BIOLOGY, (1986 Dec) 64 (12) 1333-8.
Journal code: 8606068. ISSN: 0829-8211.
AU Schuel H; Schuel R
AN 87184984 MEDLINE

L99 ANSWER 75 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
TI The pulmonary disposition of theophylline and its influence on human alveolar macrophage bactericidal function.
SO American Review of Respiratory Disease, (1986) 134/6 (1225-1228).
CODEN: ARDSBL
AU O'Neill S.J.; Sitar D.S.; Klass D.J.; et al.
AN 87048756 EMBASE

L99 ANSWER 76 OF 141 MEDLINE DUPLICATE 18
TI Reevaluation of cytochrome b and flavin adenine dinucleotide in neutrophils from patients with chronic granulomatous disease and description of a family with probable autosomal recessive inheritance of cytochrome b deficiency.
SO BLOOD, (1986 Apr) 67 (4) 1132-8.
Journal code: 7603509. ISSN: 0006-4971.
AU Ohno Y; Buescher E S; Roberts R; Metcalf J A; Gallin J I
AN 86160271 MEDLINE

L99 ANSWER 77 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Inhibition of growth of Plasmodium falciparum by the **peroxidase** -hydrogen **peroxide**-halide antimicrobial system
SO Bulletin de la Societe Francaise de Parasitologie (1986), 4(2), 183-7
CODEN: BSFPE9; ISSN: 0761-8328
AU Malhotra, K.; Salmon, D.; Le Bras, J.; Vilde, J. L.
AN 1988:109442 HCAPLUS
DN 108:109442

L99 ANSWER 78 OF 141 WPIDS (C) 2003 THOMSON DERWENT
TI Di-enzymatic dentifrice producing hypo-thiocyanate **bacterial inhibitor** - comprises oxidisable substrate, oxido reductase enzyme, thiocyanate salt and lacto **peroxidase**.

PI EP 133736 A 19850306 (198515)* EN 35p
R: CH DE FR GB IT LI NL
JP 59231011 A 19841225 (198506)
US 4537764 A 19850827 (198537)
US 4564519 A 19860114 (198605)
EP 133736 B 19891213 (198950) EN
R: CH DE FR GB IT LI NL
DE 3480691 G 19900118 (199004)
JP 04025924 B 19920506 (199222) 14p A61K007-28
IN MONTGOMERY, R E; PELLICO, M A

L99 ANSWER 79 OF 141 MEDLINE
TI Metal ions and oxygen radical reactions in human inflammatory joint disease.
SO PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON. SERIES B: BIOLOGICAL SCIENCES, (1985 Dec 17) 311 (1152) 659-71.
Journal code: 7503623. ISSN: 0962-8436.
AU Halliwell B; Gutteridge J M; Blake D
AN 86149665 MEDLINE

L99 ANSWER 80 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI OBSERVATIONS ON THE CYTOLYTIC ACTIVITY OF LACTOPEROXIDASE USING A CONTINUOUS ASSAY.
SO PROC SOC EXP BIOL MED, (1985) 179 (3), 331-337.
CODEN: PSEBAA. ISSN: 0037-9727.
AU MCFAUL S J; STUYT E L; EVERSE J
AN 1985:377321 BIOSIS

L99 ANSWER 81 OF 141 MEDLINE
TI Comparative reactivities of various biological compounds with myeloperoxidase-hydrogen **peroxide**-chloride, and similarity of the oxidant to hypochlorite.
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1985 Jun 18) 840 (2) 204-10.
Journal code: 0217513. ISSN: 0006-3002.
AU Winterbourn C C
AN 85200035 MEDLINE

L99 ANSWER 82 OF 141 MEDLINE DUPLICATE 19
TI Antibacterial effect of lactoperoxidase and myeloperoxidase against Bacillus cereus.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1985 Jan) 27 (1) 96-101.
Journal code: 0315061. ISSN: 0066-4804.
AU Tenovuo J; Makinen K K; Sievers G
AN 85173238 MEDLINE

L99 ANSWER 83 OF 141 MEDLINE DUPLICATE 20
TI Rapid microassays of phagocytosis, **bacterial killing**, superoxide and hydrogen **peroxide** production by human neutrophils in vitro.
SO JOURNAL OF IMMUNOLOGICAL METHODS, (1985 Apr 8) 78 (1) 35-47.
Journal code: 1305440. ISSN: 0022-1759.
AU Rajkovic I A; Williams R
AN 85159115 MEDLINE

L99 ANSWER 84 OF 141 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 21
TI Bactericidal compositions containing **peroxide** and **peroxidase** for gingival and periodontal diseases
SO U.S., 5 pp. Division of U.S. Ser. No. 225,762, abandoned.
CODEN: USXXAM
IN Rosenbaum, Robert S.; Kessler, Jack
AN 1985:12416 HCAPLUS
DN 102:12416

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 4473550	A	19840925	US 1983-455420	19830103
	US 4588586	A	19860513	US 1984-621792	19840618

L99 ANSWER 85 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Bactericide for dental disease containing a **peroxide**, **peroxidase** and a donor molecule.
SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 225,762, abandoned.
CODEN: USXXAM
IN Kessler, Jack H.; Rosenbaum, Robert S.
AN 1985:12402 HCAPLUS
DN 102:12402

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4476108	A	19841009	US 1983-464596	19830207

L99 ANSWER 86 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Method and test composition for determination of hydrogen **peroxide**
SO Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
IN Aoyama, Norihito; Miike, Akira; Shimizu, Yoshiaki; Tatano, Toshio
AN 1985:58893 HCAPLUS
DN 102:58893

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 124287	A2	19841107	EP 1984-302217	19840330
EP 124287	A3	19880113		
EP 124287	B1	19930303		
R: DE, FR, GB				
JP 59182361	A2	19841017	JP 1983-56652	19830331
JP 04027839	B4	19920512		
US 4916058	A	19900410	US 1987-65126	19870623

L99 ANSWER 87 OF 141 MEDLINE DUPLICATE 22
TI Increased sensitivity to H2O2 in glutathione **peroxidase** -deficient rat granulocytes.
SO JOURNAL OF NUTRITION, (1984 Nov) 114 (11) 2003-9.
Journal code: 0404243. ISSN: 0022-3166.
AU Baker S S; Cohen H J
AN 85032921 MEDLINE

L99 ANSWER 88 OF 141 MEDLINE
TI Oxidative mechanisms utilized by human neutrophils to destroy Escherichia coli.
SO BLOOD, (1984 Jun) 63 (6) 1361-8.
Journal code: 7603509. ISSN: 0006-4971.
AU Passo S A; Weiss S J
AN 84204059 MEDLINE

L99 ANSWER 89 OF 141 MEDLINE
TI Characteristics and functional capacities of human cord blood granulocytes and monocytes.
SO PEDIATRIC RESEARCH, (1984 Nov) 18 (11) 1127-31.
Journal code: 0100714. ISSN: 0031-3998.
AU Marodi L; Leijh P C; van Furth R
AN 85087630 MEDLINE

L99 ANSWER 90 OF 141 MEDLINE
TI Phagocytes use oxygen to **kill bacteria**.
SO EXPERIENTIA, (1984 Sep 15) 40 (9) 906-9. Ref: 48
Journal code: 0376547. ISSN: 0014-4754.
AU Baggiolini M
AN 84285868 MEDLINE

L99 ANSWER 91 OF 141 MEDLINE DUPLICATE 23

TI Relationship of the human salivary **peroxidase** system to oral health.
SO JOURNAL OF ORAL PATHOLOGY, (1984 Dec) 13 (6) 573-84.
Journal code: 0342050. ISSN: 0300-9777.
AU Tenovuo J; Pruitt K M
AN 85107388 MEDLINE

L99 ANSWER 92 OF 141 MEDLINE DUPLICATE 24
TI Septage treatments to reduce the numbers of bacteria and polioviruses.
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1984 Sep) 48 (3) 566-72.
Journal code: 7605801. ISSN: 0099-2240.
AU Stramer S L; Cliver D O
AN 85045464 MEDLINE

L99 ANSWER 93 OF 141 MEDLINE DUPLICATE 25
TI The protective effect of **peroxidase** and thiocyanate against hydrogen **peroxide** toxicity assessed by the uptake of [3H]-thymidine by human gingival fibroblasts cultured in vitro.
SO ARCHIVES OF ORAL BIOLOGY, (1984) 29 (6) 445-51.
Journal code: 0116711. ISSN: 0003-9969.
AU Tenovuo J; Larjava H
AN 84279565 MEDLINE

L99 ANSWER 94 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 26
TI ANTI MICROBIAL PROPERTIES OF CALCIUM PER OXIDE IN RELATION TO ITS POTENTIAL USE AS A SEED DRESSING.
SO J GEN MICROBIOL, (1983) 129 (7), 2307-2314.
CODEN: JGMIAN. ISSN: 0022-1287.
AU SLADDIN M; LYNCH J M
AN 1984:213617 BIOSIS

L99 ANSWER 95 OF 141 MEDLINE DUPLICATE 27
TI Differential survival of Leishmania donovani amastigotes in human monocytes.
SO JOURNAL OF IMMUNOLOGY, (1983 Oct) 131 (4) 1994-9.
Journal code: 2985117R. ISSN: 0022-1767.
AU Pearson R D; Harcus J L; Roberts D; Donowitz G R
AN 84009128 MEDLINE

L99 ANSWER 96 OF 141 MEDLINE
TI [Biochemical aspects of the inflammatory reaction - with special reference to oxygen].
Biochemische Aspekte der Entzundungsreaktion - unter besonderer Berucksichtigung des Sauerstoffs.
SO ZEITSCHRIFT FUR HAUTKRANKHEITEN, (1983 Dec 1) 58 (23) 1669-86.
Journal code: 0367576. ISSN: 0301-0481.
AU Goerz G; Merk H
AN 84123367 MEDLINE

L99 ANSWER 97 OF 141 MEDLINE DUPLICATE 28
TI Role of polymorphonuclear cells in Chagas' disease. I. Uptake and mechanisms of destruction of intracellular (amastigote) forms of Trypanosoma cruzi by human neutrophils.
SO JOURNAL OF IMMUNOLOGY, (1983 Sep) 131 (3) 1504-10.
Journal code: 2985117R. ISSN: 0022-1767.
AU Villalta F; Kierszenbaum F
AN 83292480 MEDLINE

L99 ANSWER 98 OF 141 MEDLINE DUPLICATE 29
TI Inhibition of Streptococcus mutans by the lactoperoxidase antimicrobial system.
SO INFECTION AND IMMUNITY, (1983 Feb) 39 (2) 767-78.
Journal code: 0246127. ISSN: 0019-9567.

AU Thomas E L; Pera K A; Smith K W; Chwang A K
AN 83159792 MEDLINE

L99 ANSWER 99 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI LIMITING FACTORS FOR THE GENERATION OF HYPO THIO CYANITE ION AN ANTI MICROBIAL AGENT IN HUMAN SALIVA.
SO CARIES RES, (1982) 16 (4), 315-323.
CODEN: CAREBK. ISSN: 0008-6568.
AU PRUITT K M; TENOVUO H; FLEMING W; ADAMSON M
AN 1983:199285 BIOSIS

L99 ANSWER 100 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Purification of horse eosinophil **peroxidase**
SO Biochimica et Biophysica Acta (1982), 701(2), 185-91
CODEN: BBACAQ; ISSN: 0006-3002
AU Joerg, Andreas; Pasquier, Jean Marie; Klebanoff, Seymour J.
AN 1982:118034 HCAPLUS
DN 96:118034

L99 ANSWER 101 OF 141 MEDLINE
TI Hydrogen **peroxide** mediated **killing** of **bacteria**
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SO MOLECULAR AND CELLULAR BIOCHEMISTRY, (1982 Dec 10) 49 (3) 143-9. Ref: 70
Journal code: 0364456. ISSN: 0300-8177.
AU Clifford D P; Repine J E
AN 83141351 MEDLINE

L99 ANSWER 102 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI EFFECTS OF BOVINE VIRAL DIARRHEA VIRUS INFECTION ON BOVINE POLYMORPHONUCLEAR LEUKOCYTE FUNCTION.
SO AM J VET RES, (1981) 42 (2), 244-250.
CODEN: AJVRAH. ISSN: 0002-9645.
AU ROTH J A; KAEBERLE M L; GRIFFITH R W
AN 1981:217810 BIOSIS

L99 ANSWER 103 OF 141 MEDLINE
TI Mechanism of the bactericidal action of myeloperoxidase: increased permeability of the Escherichia coli cell envelope.
SO INFECTION AND IMMUNITY, (1981 Jan) 31 (1) 11-6.
Journal code: 0246127. ISSN: 0019-9567.
AU Sips H J; Hamers M N
AN 81166879 MEDLINE

L99 ANSWER 104 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.DUPLICATE 30
TI Macrophage variants in oxygen metabolism.
SO Journal of Experimental Medicine, (1980) 152/4 (808-822).
CODEN: JEMEAV
AU Damiani C.; Kiyotaki C.; Soeller W.; et al.
AN 80232092 EMBASE

L99 ANSWER 105 OF 141 MEDLINE
TI Macrophage variants in oxygen metabolism.
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1980 Oct 1) 152 (4) 808-22.
Journal code: 2985109R. ISSN: 0022-1007.
AU Damiani G; Kiyotaki C; Soeller W; Sasada M; Peisach J; Bloom B R
AN 81027379 MEDLINE

L99 ANSWER 106 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI **INHIBITION** OF PSYCHROTROPHIC **BACTERIA** IN REFRIGERATED MILK BY LACTOBACILLI ISOLATED FROM YOGHURT.
SO J FOOD PROT, (1980) 43 (9), 675-678.
CODEN: JFPRDR. ISSN: 0362-028X.
AU MARTIN D R; GILLILAND S E
AN 1981:160786 BIOSIS

L99 ANSWER 107 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Mechanism of the microbicidal (detoxication) effect by the myeloperoxidase-hydrogen **peroxide**-halide system. IV. Oxidation of cytochalasins by the myeloperoxidase system
SO Shika Kiso Igakkai Zasshi (1980), 22(4), 545-9
CODEN: SHKKAN; ISSN: 0385-0137
AU Odajima, Takeshi; Sato, Naoko; Onishi, Mihoko
AN 1981:168562 HCAPLUS
DN 94:168562

L99 ANSWER 108 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Mechanism of the microbicidal (detoxication) effect of the myeloperoxidase-hydrogen **peroxide**-halide system. III. Oxidative degradation of the nucleic acid and its constituents by the myeloperoxidase system
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CODEN: SHKKAN; ISSN: 0385-0137
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AN 1981:78915 HCAPLUS
DN 94:78915

L99 ANSWER 109 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: CAREBK; ISSN: 0008-6568
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DN 93:198603

L99 ANSWER 110 OF 141 MEDLINE
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L99 ANSWER 111 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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SO Zentralblatt fuer Bakteriologie, Abt. 1, Originale B: Hygiene, Krankenhaushygiene, Betriebshygiene, Praeventive Medizin (1980), 170(1-2), 133-42
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AU Talon, Regine; Labadie, Jean; Larpent, Jean Paul
AN 1980:211535 HCAPLUS
DN 92:211535

L99 ANSWER 112 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 31
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L99 ANSWER 113 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.DUPLICATE 32
TI Mechanisms of killing of newborn larvae of Trichinella spiralis by neutrophils and eosinophils. Killing by generators of hydrogen **peroxide** in vitro.
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CODEN: JCINAO

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L99 ANSWER 114 OF 141 MEDLINE
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Journal code: 0246127. ISSN: 0019-9567.
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L99 ANSWER 115 OF 141 HCAPLUS COPYRIGHT 2003 ACS
TI Aspects of bacterial antagonism in oral secretions by staphylococci
SO Bollettino dell'Istituto Sieroterapico Milanese (1979), 58(4), 290-4
CODEN: BISMAP; ISSN: 0021-2547
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L99 ANSWER 116 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: SBTSAG; ISSN: 0583-8924
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L99 ANSWER 117 OF 141 MEDLINE DUPLICATE 33
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L99 ANSWER 118 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: JEMEAV; ISSN: 0022-1007
AU Rosen, Henry; Klebanoff, Seymour J.
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L99 ANSWER 119 OF 141 MEDLINE
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L99 ANSWER 120 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: AMACCQ; ISSN: 0066-4804
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L99 ANSWER 121 OF 141 MEDLINE

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L99 ANSWER 122 OF 141 MEDLINE
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L99 ANSWER 123 OF 141 MEDLINE DUPLICATE 34
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L99 ANSWER 124 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
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L99 ANSWER 128 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
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AN 1977:192904 BIOSIS

L99 ANSWER 129 OF 141 MEDLINE DUPLICATE 35
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L99 ANSWER 130 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
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CODEN: JOPDAB
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L99 ANSWER 131 OF 141 MEDLINE DUPLICATE 36
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Journal code: 7605802. ISSN: 0003-6919.
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L99 ANSWER 134 OF 141 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
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L99 ANSWER 135 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: INFIBR; ISSN: 0019-9567
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AN 1971:123121 HCAPLUS
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L99 ANSWER 136 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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L99 ANSWER 137 OF 141 MEDLINE DUPLICATE 38
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L99 ANSWER 138 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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SO Koku Eisei Gakkai Zasshi (1970), 20(1), 100-4
CODEN: KEGZA7; ISSN: 0023-2831
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AN 1971:122364 HCAPLUS
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L99 ANSWER 139 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: JOBAAY; ISSN: 0021-9193
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AN 1969:428113 HCAPLUS
DN 71:28113

L99 ANSWER 140 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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SO Journal of Bacteriology (1969), 97(2), 635-9
CODEN: JOBAAY; ISSN: 0021-9193
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L99 ANSWER 141 OF 141 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: JEMEAV; ISSN: 0022-1007
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AN 1968:27662 HCAPLUS
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=> save temp 199 peroxide/a
ANSWER SET L99 HAS BEEN SAVED AS 'PEROXIDE/A'

=> d ab 6,13,21,23,25,32,33,38,46,50,54,57,61,67,72,78,81,84,99,101,120

L99 ANSWER 6 OF 141 MEDLINE
AB Reactive oxidant species (superoxide, hydrogen **peroxide**, hydroxyl radical, hypohalous acid, and nitric oxide) are involved in many of the complex interactions between the invading microorganism and its host. Regardless of the source of these compounds or whether they are produced under normal conditions or those of oxidative stress, these oxidants exhibit a broad range of toxic effects to biomolecules that are essential for cell survival. Production of these oxidants by microorganisms enables them to have a survival advantage in their environment. Host oxidant production, especially by phagocytes, is a counteractive mechanism aimed at **microbial killing**.
However, this mechanism may be contribute to a deleterious consequence of oxidant exposure, i.e., inflammatory tissue injury. Both the host and the microorganism have evolved complex adaptive mechanisms to deflect oxidant-mediated damage, including enzymatic and nonenzymatic

oxidant-scavenging systems. This review discusses the formation of reactive oxidant species in vivo and how they mediate many of the processes involved in the complex interplay between microbial invasion and host defense.

L99 ANSWER 13 OF 141 SCISEARCH COPYRIGHT 2003 THOMSON ISIDUPLICATE 4
AB This work describes an antibacterial enzyme system based on the aerobic conversion of extracellular L-lactic acid to pyruvic acid and hydrogen **peroxide** using the enzyme L-lactate **oxidase** (2-hydroxyacid **oxidase**). Subsequent production of hypothiocyanate ions by hydrogen **peroxide** in the presence of salivary thiocyanate and sialoperoxidase should lead to a rapid and selective **inhibition** of dental plaque **bacteria**. This system was tested in glucose cultures of oral **bacteria** and results showed **inhibition** of acid production in the presence of saliva suggesting that the enzyme shows potential for antibacterial activity under the conditions found in the mouth. The action of lactate **oxidase** was compatible with the enzymes found in Zendium (Oral-B) dentrifice and a mixture of the two gave cumulative inhibition. A hydrated aluminium oxide gel provided a substratum for concentrating the enzyme and binding it to salivary bacterial-protein aggregates.

L99 ANSWER 21 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB This invention relates to a method for inactivating pathogens using the **peroxidase** enzyme. The **peroxidase** enzyme is reacted with hydrogen **peroxide** or a source of hydrogen **peroxide** and an iodide anion to generate reaction products which are sepd. from the **peroxidase** enzyme and then used to inactivate pathogenic organisms. The **peroxidase** is immobilized on a solid support, e.g. activated latex particles. Inactivation of e.g. Staphylococcus aureus treated with immobilized **peroxidase** reaction products is described.

L99 ANSWER 23 OF 141 WPIDS (C) 2003 THOMSON DERWENT
AB WO 9527046 A UPAB: 20010207
An enzymatic antimicrobial compsn. (I) comprises a vanadium haloperoxide (VHPO), a halide source and hydrogen **peroxide** (or a source of H2O2). The VHPO is pref. a chloroperoxidase (VCPO).

USE - (I) is used for **inhibiting microbial** growth, by application to a surface to be disinfected (process claimed). (I) may be used: (i) to provide hygiene benefits for hard-surface cleaning and fabric washing; (ii) to provide hygiene and cleaning in industrial/institutional applications such as in hospitals and for cleaning/disinfecting medical equipment; (iii) in the dairy industry, for disinfecting milking equipment; and as deodorants (by combating bacteria which cause malodour). (I) may be formulated as powder (for dissolution in water), liq. products or gels, opt. additionally contg. surfactants, thickeners, etc. (I) is generally diluted 5-100 times with water before use.

ADVANTAGE - (I) shows a different spectrum activity from known enzymatic antimicrobial compsns., e.g. having activity against difficult to combat microorganisms such as Streptococcus faecalis, or non-pathogenic microorganisms causing food spoilage. (I) may include a high initial H2O2 concn., in combination with a conventional amt. of halide, without affecting enzyme stability and function.
Dwg.0/4

L99 ANSWER 25 OF 141 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 8
AB Nodules of Rhizobium leguminosarum bv. phaseoli in symbiosis with Phaseolus vulgaris were compared with regard to their nitrogenase activity and activities of enzymes involved in the removal of O sub(2) super(-) and H sub(2)O sub(2) as well as total ascorbate content. Activities of catalase (EC 1.11.1.6), ascorbate **peroxidase** (EC 1.11.1.11), and total ascorbate content were consistently higher in nodules inhabited by

bacterial strains with higher nitrogenase activity. Values for superoxide dismutase (EC 1.15.11), and guaiacol **peroxidase** activity did not differ for the bacterial strains compared. On the other hand, when different plant cultivars were inoculated with the same bacterial strain, high nitrogenase activity did not correlate with a higher activity of the oxygen scavenging enzyms or a higher content of total ascorbate. In this case, values for guaiacol **peroxidase** activity were greatly enhanced in nodules with lower nitrogenase activity. This may be part of a hypersensitive reaction of the plant cultivar against the **bacterial** symbiotic partner. **Inhibition** of catalase activity in the nodules by addition of triazole to the nutrient solution did not alter nitrogenase activity within the first nine hours after addition. It can be concluded that the activity of catalase, ascorbate **peroxidase**, and superoxide dismutase is not generally coupled to nitrogenase activity in root nodules of P. vulgaris.

L99 ANSWER 32 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB Antibacterial and antifungal compds. (e.g. quinone I) are manufd. by treatment of phenolic compds. with **peroxidase** in the presence of H2O2. Guaiacol was incubated with H2O2 and **peroxidase** at 25.degree. and pH 5.8 for .apprx.3 h to manuf. phenols I, II, and III, which inhibited Bacillus subtilis with min. inhibitory concn. of 6.3, 25, and 100 .mu.g/mL, resp., vs .gtoreq.1000 .mu.g/mL, for guaiacol.

L99 ANSWER 33 OF 141 WPIDS (C) 2003 THOMSON DERWENT
AB RD 357011 A UPAB: 19940407
Decolorisation of foodstuffs is effected by treatment with an H2O2 source (I) in the presence of **peroxidase** (II).
(I) is pref. H2O2, an (in)organic peracid or salt, or an H2O2-generating enzyme system. (II) may be derived from plants (e.g. horse radish), fungi (e.g. Coprinus spp.) or bacteria (e.g. Bacillus spp.). Fish roe is treated with 0.01-100 (esp. 1-20) ppm H2O at 5-30 deg.C for 24-120 hrs., opt. with addn. of 4-15% NaCl to **inhibit microbial** growth. Residual H2O2 may be removed by catalase treatment (see JA276579 and 633788). (II) is used in an amt. of 100-10000 U/l, pref. at pH 4-9.
USE/ADVANTAGE - The process may be applied to fish (e.g. herring) roe. Addn. of (II) greatly reduces the amt. of (I) required to achieve adequate decolorisation.
Dwg.0/0

L99 ANSWER 38 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB A synergistic microbicidal compn., esp. active against Gram-neg. bacteria, such as Salmonella, comprises a hypothiocyanate-generating system, adjusted to pH 1.5-3.6, and a di- ar tricarboxylic acid. The hypothiocyanate-generating system comprises a **peroxidase**, an alkali metal thiocyanate and a **peroxide**.

L99 ANSWER 46 OF 141 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB The use of hydrogen **peroxide** generated by a metal catalyst in a Fenton-like reaction or by **peroxidase** (EC-1.11.1.7) for the treatment of waste-waters containing phenol, phenol derivatives and formaldehyde was examined. An advantage of using **peroxidase** was the absence of side products; apart from partially oxidized intermediates, the only major side product was water. The substrate concentration could range from 100 ppm to COD values up to 100,000 mg/l without the process suffering from much loss of kinetic efficiency. Both techniques produced high degrees of substrate oxidation and COD reduction. Metal-catalyzed oxidation had a slightly better efficiency in the % COD reduction of phenol, chlorophenols and nitrophenols. Although the 2 systems showed similar formaldehyde oxidation efficiencies, the enzyme system was the method of choice since even traces of enzyme were sufficient to **kill** the **bacterial** of a biological treatment vat, and the reaction intermediate, formic acid, was oxidized to CO2. Both treatments have a lower social impact than incineration,

and the enzyme method especially can be considered as a good ecological alternative. (0 ref)

L99 ANSWER 50 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB A synergistic antimicrobial compn. comprises an antimicrobial polypeptide, a hypothiocyanate, and a buffering component capable of providing a pH between 3 and 5. A particularly preferred compn. contains lactoperoxidase, a thiocyanate, a **peroxide** (e.g. H2O2), nisin, and a buffer. A method for prepg. the compn. and its use for killing Salmonella on poultry is described.

L99 ANSWER 54 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB Target cells bearing a distinguishing surface antigen may be killed selectively, without harm to bystander cells, by administering myeloperoxidase, eosinophil **peroxidase**, thyroperoxidase, or salivary **peroxidase**, conjugated to a binding agent such as an antibody capable of specifically binding to the surface antigen, and a H2O2-producing enzyme conjugated to a second binding agent. The H2O2-producing enzyme, in the presence of its substrate, generates H2O2, which is utilized by the **peroxidase** to lethally oxidize the target cells. Suitable H2O2-producing enzymes are glucose **oxidase** , NADPH **oxidase**, alc. **oxidase**, etc. The method can be used to **kill bacteria**, fungi, yeast or viral particles. The method is also usable to remove, in vitro, undesirable T-cells from bone marrow, prior to transplanting. Myeloperoxidase and Aspergillus niger glucose **oxidase** were each conjugated to mouse monoclonal antibody specific for a B cell-assocd. antigen, using the method of S. Avrameas (1969). Joint application of the 2 conjugates was highly toxic in vitro to SO-4 human lymphoma, B-cells, with no damage to nontarget cells.

L99 ANSWER 57 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB A microbicidal compn. contains iodide and lactoperoxidase and/or horseradish **peroxidase**, and a H2O2 donor, suitably in water-free form. The formulation contains 0.2 mg/mL lactoperoxidase and/or horseradish **peroxidase**, and 0.05 mM H2O2 donor, and >10 ppm iodide, and a pH-adjusting agent such that the pH is 3.25-7.0, preferably 4.5-6.0 when lactoperoxidase is used and the pH is 3.5-6.0, preferably 4.5-5.5, when horseradish **peroxidase** is used. The optical d. of the aq. compn. at 460 nm is >0.02 when disolved in water. A disinfectant contained lactoperoxidase (10 mg/L), glucose **oxidase** (100 units/L), glucose (0.3%), NaI (100 ppm), urea (80 g/L), and citric acid 0.000048 g/L). The initial pH was 6, and pH after 24 h and 48 h was 5.1, and 5, resp. The lactoperoxidase activity was 0.153 units/L and 0.024 units/L after 30 min and 24 h, resp. The absorbancy at 460 nm was 0.031, 0.075, and 0.078 after 10 min, 24 h, and 48 h, resp. The microbicidal activity of Escherichia coli (1.7 .times. 106 colony-forming units), Staphylococcus aureus (2.9 .times. 106 colony-forming units), and Streptococcus agal (1.5 .times. 106 colony-forming units) was reduced to <1 colony-forming units for E. coli and S. aureus and to 90 colony-forming units for S. agal after 2 min in each case when the above disinfectant was used. These compns. function well at a slightly acidic, almost neutral pH at which pH iodophores do not function. The compn. is present preferably in dry form or in the form of a paste that is mixed prior to use.

L99 ANSWER 61 OF 141 HCAPLUS COPYRIGHT 2003 ACS
AB Bactericides contain .gtoreq.1 enzymes which in aq. soln. forms H2O2 in the presence of O2 and a suitable substrate. The compns. further contain a **peroxidase**, a thiocyanate, and lysozyme. An aq. soln. contg. 1800 Sumner units invertase, 1400 units lactase, 80 units glucose **oxidase**, 0.1 mmol NaSCN, 56 ABTS units lysozyme, 60 mg glycerol, 20 g EDTA, 0.1 mmol Na2HPO4, and H2O to 100 mL was used to drench gauze pads. The solvent was evapd. and the resulting wound dressing was used together with a vulnerary powder contg. 2% glucose.

L99 ANSWER 67 OF 141 MEDLINE

AB Listeria monocytogenes, a gram-positive motile bacterium which can cause severe bacterial infection in humans, is considered to be pathogenic by virtue of its ability to resist intracellular killing. Since the mechanism of intracellular survival is poorly understood, we assessed the sensitivity of L. monocytogenes to several potent antibacterial products. Phorbol myristate acetate (PMA)-stimulated polymorphonuclear cells (PMNs) produced extracellular antibacterial products which were inhibited completely by catalase, suggesting a role for oxidative agents in this process. L. monocytogenes in logarithmic (log) growth phase resisted PMA-stimulated PMN extracellular products significantly more than L. monocytogenes in stationary (stat) growth phase or Escherichia coli (three strains) in either phase of growth. The role of oxidative agents was studied further by using xanthine **oxidase**-xanthine, glucose **oxidase**-glucose, and myeloperoxidase enzyme systems to generate hydroxyl radical (.OH), hydrogen **peroxide** (H2O2), and hypochlorous acid (OCl-), respectively. L. monocytogenes in log phase resisted the antibacterial products of these enzyme systems under conditions which produced superoxide (O2-) and H2O2 at concentrations similar to those produced extracellularly by PMA-stimulated PMNs, while stat-growth-phase L. monocytogenes and E. coli in either phase of growth were susceptible. Antibacterial activity could be blocked or inhibited by exogenous catalase (for all oxygen radical-generating systems), mannitol, or desferoxamine (for xanthine **oxidase**-xanthine) and alanine (for myeloperoxidase), suggesting that .OH and OCl- were responsible for this activity. Log-phase L. monocytogenes had 2.5-fold higher bacteria-associated catalase activity, as compared with stat-phase L. monocytogenes. These experiments, therefore, suggest that log-phase L. monocytogenes resists oxidative antibacterial agents by producing sufficient catalase to inactivate these products. This may contribute to the ability of L. monocytogenes to survive intracellularly.

L99 ANSWER 72 OF 141 HCAPLUS COPYRIGHT 2003 ACS

AB A **bactericide** for **disinfecting** contact lenses has a limited period of bacteriol. activity with the bactericide comprising 3 components including a **peroxide**, a **peroxidase** and a source of donor mols. adopted to act as a substrate for the **peroxidase**. The mixt. is stored in nonreactive state and then admixed in a liq. carrier to cause a catalyzed reaction by **peroxidase** to generate free radicals from the donor mol. and then the contact lens is immersed into the soln. simultaneously with the admixt. Patients placed their contact lenses in a vial contg. NaOOH 0.09, NaCl 20, L-tyrosine 0.12 mg and 5 units horseradish **peroxidase** with addn. of 10 mL distd. H2O. The contents were mixed and exposed to the lenses for 3-5 min. The lenses were then rinsed in distd. H2O; there has no clin. discomfort or danger to the patients. Contact lenses contaminated with Staphylococcus aureus and then exposed to this soln. showed no bacterial growth.

L99 ANSWER 78 OF 141 WPIDS (C) 2003 THOMSON DERWENT

AB EP 133736 A UPAB: 19930925

Di-enzymatic dentifrice comprises, per g, 0.015-0.6 millimole of oxidisable substrate (OS) and 0.5-500 international units of oxidoreductase (OR) enzyme specific to OS, with 0.0001-0.01 millimole thiocyanate salt (TS) and 0.01-50 IU lactoperoxidase (LP) in amt. at least 2% (inIU) of amt. of OR.

H2O2 is produced by the action of OR on OS, and intracts with TS and LP to produce a hypothiocyanate **bacterial inhibitor**.

USE/ADVANTAGE - The dentifrice may be e.g. a powder, paste, cream, liq. chewing gum, chewable tablet, lozenge or floss, and does not depent on the naturally occurring, oral concn. of glucose, potassium thiocyanate or lactoperoxidase for antibacterial effectiveness

0/0

L99 ANSWER 81 OF 141 MEDLINE
AB The reactivities of myeloperoxidase-H2O2-Cl- and sodium hypochlorite with amino acids, uric acid, NADH, ascorbic acid, ADP, albumin, haemoglobin, alpha 1-antitrypsin and some hydroxyl radical scavengers have been compared. The ability of each compound to inhibit chlorination of monochlorodimedon by both oxidants was measured. Relative reaction rates varied over a range of 10(5), but the reactivities of the two oxidants with each compound were very similar, from which it is concluded that the reactions of hypochlorite accurately reflect those of the myeloperoxidase system. Thiol compounds (cysteine and GSH) and methionine were more than 100-times more reactive than other amino acids, which had comparable reactivity to NADH and uric acid. Benzoate, dimethylsulphoxide and formate were very much less reactive. The significance of these reactions of myeloperoxidase in **microbial killing** and inflammation is discussed.

L99 ANSWER 84 OF 141 HCAPLUS COPYRIGHT 2003 ACS DUPLICATE 21
AB A bactericidal compn. comprises a **peroxide, peroxidase** [9003-99-0] and donor mols. which are capable of being transformed into bactericidal free radicals. The bactericidal compns. are useful to treat bacterial diseases in the oral cavity to aid in prevention of dental caries, gingival and periodontal diseases, and an aid in sterilizing contact lenses. The admixt. can be used in a liq., paste, or dry form, and when not used in dry form, it is preferred to use 2 part formulations to prevent the reaction between **peroxide** and **peroxidase** , esp. when in dispersed form in a carrier such as water. Thus a toothpaste formulation contained silica 30, paraffin 10, sorbitol (70% in H2O) 40, Na dodecyl sulfate 2.5, coloring, flavoring, sweetener, preservative 2.4, NaF 0.1, NaHCO3 5.0 and H2O2 10%. Into a 1st chamber of the toothpaste was incorporated **peroxidase** (50 units/cm3) and into a 2nd chamber tyrosine [60-18-4] (0.20 g/cm3) as a source of donor mol. Used in the mouth, it showed good bactericidal action. The toothpaste, stored at 37.degree. for 30 days, showed a decline in enzyme activity from 50 units/cm3 to 42 units/cm3, indicating satisfactory stability.

L99 ANSWER 99 OF 141 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB The limiting factors for the generation of the **bacterial inhibitor**, hypothiocyanite OSCN- ion, in human whole saliva were studied. Significant increase in OSCN- production could be achieved both in vitro and in vivo by supplementing saliva with **peroxide** alone or with a combination of **peroxide** and SCN-. The most effective initial H2O2 concentration was 700 .mu.M. Higher concentrations caused a rapid loss in the amount of OSCN-. In contrast to expectations, supplementation of saliva with excess lactoperoxidase resulted in decreased generation of OSCN- ions. The enhancement of this naturally occurring antimicrobial system is possible by a combination of **peroxide** and SCN- ions added to human saliva in the appropriate ratios.

L99 ANSWER 101 OF 141 MEDLINE
AB Polymorphonuclear leukocytes (PMN) or neutrophils have multiple systems available for **killing** ingested **bacteria**. Nearly each of these incorporates H2O2 indicating the essential nature of this reactive oxygen intermediate for microbicidal activity. Following ingestion of bacteria by PMN, H2O2 is formed by the respiratory burst which consumes O2 and generates H2O2 from O2 .-. H2O2 is deposited intracellularly near bacteria within phagocytic vacuoles where it can react with the MPO-H2O2-halide system to form toxic hyperchlorous acid (HOCl) and/or possibly singlet oxygen (1O2). H2O2 can also react with O2 .- and/or iron (Fe++) from lactoferrin or bacteria to form the highly toxic hydroxyl radical (.OH). These mechanisms appear important since deficiencies of H2O2 production, myeloperoxidase or lactoferrin frequently

increases their owner's susceptibility to infection. In particular, examination of PMN from infection prone patients with chronic granulomatous disease (CGD) most clearly demonstrates the importance of H2O2 in **killing** of **bacteria**. CGD PMN lack the capacity to effectively generate H2O2 and subsequently have impaired ability to kill catalase positive (H2O2 producing) but not catalase negative (not H2O2 producing) bacteria. PMN also have catalase and glutathione **peroxidase** systems in their cytoplasms to protect themselves from the toxicity of H2O2. Finally, while H2O2 is critical for host defense, it can also be released extracellularly and thereby play a significant role in PMN mediated tissue injury.

L99 ANSWER 120 OF 141 HCAPLUS COPYRIGHT 2003 ACS

AB The mechanism of antimicrobial activity of the **peroxidase** [9003-99-0]- H2O2-I- system was investigated. Inhibition of respiration and loss of viability of E. coli were used as measures of antimicrobial activity. Because the **bacteria** destroyed H2O2, **peroxidase antimicrobial** action depended on the competition for H2O2 between the bacteria and the **peroxidase**. Utilization of H2O2 by the **peroxidase** was favored by increasing either the **peroxidase** or the I- concn., lowering the temp. to lower the rate of destruction of H2O2 by the bacteria, and adding H2O2 in small increments so as to avoid a large excess of H2O2 relative to I-. When utilization of H2O2 by the **peroxidase** system was favored, the **peroxidase** system and I2 were equiv. Also, identical antimicrobial action was obtained either by incubating the bacteria directly with the **peroxidase** system or by preincubating the **peroxidase** system so as to form I2 and then adding the bacteria. On the other hand, **peroxidase** antimicrobial action could be obtained at low I- concns. These I- concns. were lower than the concn. of I2 that was required for antimicrobial action. **Peroxidase** -catalyzed oxidn. of I- apparently yields I2, which reacts with bacterial components to yield the oxidized components and I-. The I- that is released can be reoxidized and participate again in the oxidn. of bacterial components. In this way, I- acts as a cofactor in the **peroxidase**-catalyzed oxidn. of bacterial components.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	280.39

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-7.81

STN INTERNATIONAL LOGOFF AT 15:52:01 ON 21 MAY 2003

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	594	(sanitiz$ or disinfect$ or antimicrob$ or antibacter$ or antfung$ or (kill$ or inhibit$)near3(bacter$ or microb$)) same (peroxidase$ or oxidase$)	USPAT; US-PGPUB	2003/05/21 14:20
2	L2	384	coprinus or cinereus	USPAT; US-PGPUB	2003/05/21 14:21
3	L3	26	1 and 2	USPAT; US-PGPUB	2003/05/21 14:21
4	L4	8	1 same laundry	USPAT; US-PGPUB	2003/05/21 14:45
5	L5	22	1 same detergent$	USPAT; US-PGPUB	2003/05/21 14:45

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	594	(sanitiz$ or disinfect$ or antimicrob$ or antibacter$ or antfung$ or (kill$ or inhibit$)near3(bacter$ or microb$)) same (peroxidase$ or oxidase$)	USPAT; US-PGPUB	2003/05/21 14:20
2	L2	384	coprinus or cinereus	USPAT; US-PGPUB	2003/05/21 14:21
3	L3	26	1 and 2	USPAT; US-PGPUB	2003/05/21 14:21

PGPUB-DOCUMENT-NUMBER: 20020164741

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164741 A1

TITLE: Non-aqueous, liquid, enzyme-containing compositions

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 10/ 035713

DATE FILED: November 7, 2001

RELATED-US-APPL-DATA:

child 10035713 A1 20011107

parent division-of 09174202 19981016 US GRANTED

parent-patent 6355461 US

child 09174202 19981016 US

parent continuation-of PCT/DK97/00194 19970429 US UNKNOWN

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	0513/96	1996DK-0513/96	April 29, 1996
DK	0996/96	1996DK-0996/96	September 16, 1996

US-CL-CURRENT: 435/189, 424/402

ABSTRACT:

A substantially water-free, liquid, enzyme-containing composition comprises: (A) an enzyme; (B) a substance selected from (i) substances which in aqueous medium are substrates for said enzyme, (ii) substances which in aqueous medium are precursors for substrates for said enzyme, and (iii) substances which are cofactors for said enzyme; and (C) a non-aqueous liquid phase.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional of U.S. patent application Ser. No. 09,174,202, filed Oct. 16, 1998 (now allowed), which is a continuation of international application no. PCT/DK97/0194, filed on Apr. 29,1997, and claims

priority under 35 U.S.C. 119 of Danish application serial nos. 0513/96, filed Apr. 29, 1996, and 0996/96, filed Sep. 16, 1996, the contents of which are fully incorporated herein by reference.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (34):
[0032] Laccases are obtainable from a variety of microbial sources, notably bacteria and fungi (including filamentous fungi and yeasts), and suitable examples of laccases are to found among those obtainable from fungi, including laccases obtainable from strains of Aspergillus, Neurospora (e.g. N. crassa), Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes [some species/strains of which are known by various names and/or have previously been classified within other genera; e.g. Trametes villosa=T. pinsitus=Polyporus pinsitis (also known as P. pinsitus or P. villosus)=Coriolus pinsitus], Polyporus, Rhizoctonia (e.g. R. solani), **Coprinus** (e.g. C. plicatilis), Psatyrella, Myceliophthora (e.g. M. thermophila), Schytalidium, Phlebia (e.g. P. radita; see WO 92/01046), Coriolus (e.g. C. hirsutus; see JP 2-238885), Pyricularia or Rigidoporus.

Summary of Invention Paragraph - BSTX (40):
[0038] Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g. **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes versicolor (e.g. PR4 28-A).

Summary of Invention Paragraph - BSTX (47):
[0045] A suitable recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Summary of Invention Paragraph - BSTX (164):
[0162] The present invention makes it possible to prepare storage-stable compositions which, when brought into contact with an appropriate aqueous medium, generate an **antimicrobial** (e.g. fungicidal or bacteriocidal) substance suited for **disinfection** of a microbially contaminated locus. Such compositions will be useful, e.g., for industrial use as **disinfectants for disinfecting** microbially contaminated surfaces, areas, objects, utensils and the like, or for personal care use as **disinfectants for the disinfection** of dentures, contact lenses, skin, wounds, etc. Examples of appropriate formulations of this type are compositions comprising a **peroxidase** (EC1.11; such as one of those classified under EC1.11.1.7), a hydrogen peroxide precursor (e.g. one of those mentioned above in the context of enzyme substrate precursors, such as an alkali metal perborate) and an oxidizable substance [e.g. an iodide (I.sup.-) salt such as sodium or potassium iodide] which upon bringing the composition of the invention into contact with an aqueous medium (e.g. water or another

aqueous diluent, or a body fluid such as serum or blood) becomes oxidized by the action of the **peroxidase/peroxide** system and generates a **disinfective** substance [e.g., in the case of an iodide salt, elemental iodine (I.sub.2) and/or triiodide (I.sub.3.sup.-)]. In the case of oxidation of iodide to iodine, a **peroxidase** classified under EC1.1.1.8 (a so-called "iodide **peroxidase**" may also be an appropriate **peroxidase**.

Summary of Invention Paragraph - BSTX (169):

[0167] Other interesting applications of the invention in the area of personal care include applications in contact lens cleaning, in dental care and in oral hygiene: Contact lens cleaning/**disinfection** systems are frequently based on the use of a **peroxidase** in combination with hydrogen peroxide. Following treatment of contact lenses with such a system, it is important to ensure adequate removal of the cleaning medium, particularly removal of hydrogen peroxide, from the lenses in order to avoid eye irritation or other eye damage. Employing the methodology of the present invention it is, for example, possible to prepare substantially water-free liquid compositions containing a hydrogen peroxide precursor (e.g. one of those already mentioned earlier, above) together with a catalase (EC1.11.1.6), especially a catalase which has been formulated (e.g. by appropriate coating) as a slow-release or delayed-release product. Using such a composition in combination with a **peroxidase** for cleaning contact lenses, (a) the requisite hydrogen peroxide for the cleaning/**disinfection** process will be made available (via reaction of the hydrogen peroxide precursor which takes place in the--normally aqueous--cleaning medium), and (b) remaining hydrogen peroxide will be subsequently destroyed via the action of the catalase which is released into the cleaning medium.

Summary of Invention Paragraph - BSTX (170):

[0168] With respect to dental care and oral hygiene applications of the invention, particularly interesting aspects include whitening (bleaching) of teeth and oral **disinfection** using formulations (e.g. toothpastes, or liquid concentrates which can be diluted in water to give a mouthwash or the like) which constitute substantially water-free compositions of the invention and which, in use, produce hydrogen peroxide. For such purposes, particularly suitable compositions include those containing a hydrogen peroxide generating system comprising a combination of (i) an **oxidase** enzyme which employs oxygen (e.g. oxygen in the atmosphere) as acceptor and which, in combination with an appropriate substrate, generates hydrogen peroxide, and (ii) a substrate appropriate therefor.

Summary of Invention Paragraph - BSTX (174):

[0172] A dental care/oral care composition (composition according to the invention) comprising such a hydrogen peroxide generating system may suitably further comprise a **peroxidase**, e.g. for the purpose of further enhancing the oxidative effect (bleaching/whitening/**disinfection** effect) which is achieved by the hydrogen peroxide released.

PGPUB-DOCUMENT-NUMBER: 20020119136

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119136 A1

TITLE: **Antimicrobial peroxidase** compositions

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 09/ 815848

DATE FILED: March 23, 2001

RELATED-US-APPL-DATA:

child 09815848 A1 20010323

parent division-of 09174956 19981019 US ABANDONED

child 09174956 19981019 US

parent continuation-of PCT/DK97/00205 19970506 US UNKNOWN

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	0559/96	1996DK-0559/96	May 9, 1996
DK	0785/96	1996DK-0785/96	July 15, 1996

US-CL-CURRENT: 424/94.4, 424/195.15 , 424/616

ABSTRACT:

Enzymatic compositions comprising a **Coprinus peroxidase,** hydrogen, peroxide or a source of hydrogen peroxide, and an enhancing agent such as an electron donor, e.g., phenothiazine-10-propionic acid; 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulfonate); acetosyringate; C.sub.1-8-alkylsyringate; or a water-soluble halide or thiocynate salt such as potassium iodide, have **antimicrobial** properties useful e.g., for inhibiting or killing microorganizms present in laundry, on human or animal skin, hair, mucous membranes, oral cavities, teeth, wounds, bruises, and on hard surfaces, and can be used as **disinfectant,** a preservative for cosmetics, and for cleaning, **disinfecting or inhibiting microbial** growth on process equipment used for e.g. water treatment, food processing, chemical or pharmaceutical processing, paper pulp processing, and water sanitation.

---------- KWIC ---------

Abstract Paragraph - ABTX (1):
Enzymatic compositions comprising a **Coprinus peroxidase,** hydrogen, peroxide or a source of hydrogen peroxide, and an enhancing agent such as an electron donor, e.g., phenothiazine-10-propionic acid; 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulfonate); acetosyringate; C.sub.1-8-alkylsyringate; or a water-soluble halide or thiocynate salt such as potassium iodide, have **antimicrobial** properties useful e.g., for inhibiting or killing microorganizms present in laundry, on human or animal skin, hair, mucous membranes, oral cavities, teeth, wounds, bruises, and on hard surfaces, and can be used as **disinfectant,** a preservative for cosmetics, and for cleaning, **disinfecting or inhibiting microbial** growth on process equipment used for e.g. water treatment, food processing, chemical or pharmaceutical processing, paper pulp processing, and water sanitation.

Title - TTL (1):
Antimicrobial peroxidase compositions

Summary of Invention Paragraph - BSTX (1):
[0001] The present invention relates to an enzymatic composition capable of **killing or inhibiting microbial** cells or microorganisms, more specifically microbial cells or microorganisms present in laundry, on hard surface, on skin, teeth or mucous membranes; and for preserving food products, cosmetics, paints, coatings, etc., the composition comprising a **peroxidase** enzyme and an enhancing agent acting as electron donor.

Summary of Invention Paragraph - BSTX (3):
[0002] Various enzymatic **antimicrobial** compositions are known in the art. For instance, WO 94/04127 discloses stabilized dentifrice compositions which are capable of producing **antimicrobially** effective concentrations of hypothiocyanite ions. The compositions contain an oxidoreductase capable of producing hydrogen peroxide and a **peroxidase** enzyme capable of oxidizing thiocyanate ions, which are normally present in saliva, to **antimicrobial** hypothiocyanite ions. Suitable **peroxidases** include lactoperoxidase, myeloperoxidase, salivary **peroxidase** and chloroperoxidase.

Summary of Invention Paragraph - BSTX (4):
[0003] In EP-A-0 500 387 enzymatic **antimicrobial** compositions are disclosed comprising a haloperoxidase, e.g. myelo**-peroxidase,** eosinophil **oxidase,** lactoperoxidase and chloroperoxidase, which selectively binds to and inhibits the growth of target microorganisms in the presence of peroxide and halide.

Summary of Invention Paragraph - BSTX (8):
[0006] Surprisingly, it has been found that the combined action of a **peroxidase** enzyme from the fungus **Coprinus** and an enhancing agent acting as

electron-donor, when applied to e.g. a hard surface, skin, mucous membranes, oral cavity, hair, or laundry in the presence of hydrogen peroxide, results in a hitherto unknown synergistic **antimicrobial** effect.

Summary of Invention Paragraph - BSTX (9):

[0007] Thus, based on these findings the present invention provides, in a first aspect, an enzymatic **antimicrobial** composition comprising or consisting essentially of a **peroxidase** obtainable from or produced by the fungus **Coprinus,** an enhancing agent, and hydrogen peroxide or a source of hydrogen peroxide.

Summary of Invention Paragraph - BSTX (20):

[0017] Without being bound to this theory, it is believed that the key reaction in the **antimicrobial** effect of the combined **peroxidase/enhancing** agent system of the present invention is the oxidation of essential protein and enzyme sulphydryl groups.

Summary of Invention Paragraph - BSTX (21):

[0018] The **peroxidase** enzyme is able to catalyse H.sub.2O.sub.2-dependent oxidation of an electron-donor, e.g. halide ions or the thiocyanate ion (SCN.sup.-, a pseudohalide) to yield halogens or other oxidising agents. The oxidising agents make an electrophilic attack on microbial components, resulting in chemical modification of essential enzymes, transport systems, and other functional components. Sulfhydryl groups are especially susceptible to electrophilic attack, and are usually present in higher amounts than other easily oxidised groups. Aromatic amino acid residues are also susceptible to attack. Most aspects of **antimicrobial** action can be correlated with chemical modification of these nucleophilic components. **Antimicrobial** activity is favoured by influences that increase the stability of the oxidising agent, provided that these influences do not interfere with their electrophilic character, or their ability to penetrate microbial membranes. Although H.sub.2O.sub.2 itself is a powerful oxidising agent, the H.sub.2O.sub.2 molecule is stabilised and reacts slowly with biological materials. Also, most cells have enzymes that rapidly eliminate H.sub.2O.sub.2. **Peroxidase-catalysed** oxidation of e.g. halides or SCN.sup.- conserves the oxidising power of H.sub.2O.sub.2 in forms that react more rapidly, and for which the target cells may have no defense. (Thomas, E. L. in "The Lactoperoxidase System". Ed. By Pruitt, K. M., and Tenovuo, J. O., New York, 1985).

Summary of Invention Paragraph - BSTX (30):

[0024] The peroxidase employed in the method of the invention is preferably producible by plants (e.g. horseradish or soybean peroxidase) or microorganisms such as fungi or bacteria, more preferably by fungi including strains belonging to the sub-division Basidiomycotina, class Basidiomycetes, especially the genus **Coprinus,** in particular **Coprinus cinereus** f. microsporus (IFO 8371), or **Coprinus** macrorhizus.

Summary of Invention Paragraph - BSTX (32):

[0026] Particularly, a recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634, or a variant thereof, e.g., a variant as described in WO 94/12621. Accordingly, a useful recombinant peroxidase may be produced by using a DNA construct comprising the DNA sequence shown in SEQ ID No. 1 encoding a **Coprinus** sp. peroxidase, or a suitable modification thereof.

Summary of Invention Paragraph - BSTX (44):

[0038] The **peroxidase** enzyme may be present in the composition of the invention corresponding to 0.01-100 POXU per ml of ready-to-use liquid, i.e. of washing solution, **disinfecting** liquid, preserving liquid, foot bath etc.

Summary of Invention Paragraph - BSTX (47):

[0040] Iodine (I.sub.2) is widely used as a **disinfectant,** for many types of situations, for example as skin cleansers, for wound **disinfection,** contact lens cleaning and water sanitation, to mention a few. In addition, iodine is also useful in catalysts, as an animal feed additive, in pharmaceuticals, and as polymer precursor additives. Although the I.sub.2-based system of **disinfection** is extremely effective, several factors limit the scope of directly applying I.sub.2. In particular, the storage, transportation and handling of I.sub.2 are extremely hazardous, due to the chemicals involved in production and also due to the toxicity of I.sub.2 itself even in moderate concentrations. Generally, I.sub.2 is obtained from natural sources, such as brine, by processes that utilise strong inorganic acids, chlorine gas, and other hazardous chemicals. Iodophores have been developed as I.sub.2 carriers to replace simple I.sub.2 solutions for industrial and domestic **disinfection**. In addition, binary systems capable of generating I.sub.2 from an I.sup.- salt and a chemical oxidant are also available. Both these systems create the need for disposal of large, potentially toxic amounts of by-products. Another alternative to both industrially producing I.sub.2 on a large scale, and to applying I.sub.2 as a **disinfectant,** has been found in the **peroxidase-based** generation of 12 (U.S. Pat. No. 4,282,324; 4,617,190; 4,588,586; 4,937,072; 5,055,287; 5,227,161; 5,169,455; 4,996,146; 4,576,817). Such methods involve the use of a **peroxidase** enzyme, the oxidising agent H.sub.2O.sub.2, and a source of ionic iodide, Unfortunately, this method has the disadvantage of requiring the hazardous and volatile peroxide or peracid, which has to be either transported or generated in situ by additional enzymatic or chemical steps, this making the system more complex and/or costly.

Summary of Invention Paragraph - BSTX (258):

Antibacterial Activity of **Coprinus cinereus** Recombinant **Peroxidase** Using Different Enhancing Agents

Summary of Invention Paragraph - BSTX (259):

[0236] The **antibacterial** activity of **Coprinus cinereus,** IFO 8371, recombinant **peroxidase** (rCIP) available from Novo Nordisk A/S, DK-2880 Bagsvaerd, Denmark, has been tested in a phosphate buffer with the following enhancing agents: sodium thiocyanate (NaSCN), potassium iodide (KI),

10-phenothiazine propionic acid (PPT), butyl syringate (BS) and 2,2' azinobis(3-ethylbenzothiazoline-6-sulfonate) (ABTS). The hydrogen peroxide was either generated by glucose **oxidase** or added directly in the concentration of 5 mM. In order to avoid interference with substrate components, the experiment was carried out in a buffer instead of in a growth substrate.

Claims Text - CLTX (2):
1. A method of killing or inhibiting a microorganism, comprising contacting said microorganism with a composition comprising: (a) a peroxidase produced by or derived from the fungus **Coprinus**; (b) an enhancing agent; and (c) a hydrogen peroxide or a source of hydrogen peroxide.

Claims Text - CLTX (3):
2. The method of claim 1, wherein the peroxidase is a recombinant enzyme obtainable from **Coprinus cinereus**.

Claims Text - CLTX (4):
3. The method of claim 1, wherein the peroxidase is obtainable from **Coprinus cinereus,** IFO 8371.

Claims Text - CLTX (24):
23. A method of preserving a cosmetic product, comprising adding to the cosmetic product an effective amount of an enzymatic **antimicrobial** composition comprising: (a) a **peroxidase** produced by or derivable from the fungus **Coprinus**; (b) an enhancing agent; and (c) hydrogen peroxide or a source of hydrogen peroxide.

Claims Text - CLTX (27):
26. A method for cleaning or **disinfecting** contact lenses comprising contacting said contact lenses with an effective amount of an a enzymatic **antimicrobial** composition comprising: (a) a **peroxidase** produced by or derivable from the fungus **Coprinus**; (b) an enhancing agent; and (c) hydrogen peroxide or a source of hydrogen peroxide.

Claims Text - CLTX (28):
27. A method of **inhibiting microbial** growth on a hard surface, wherein the surface is contacted with an a enzymatic **antimicrobial** composition comprising: (a) a **peroxidase** produced by or derivable from the fungus **Coprinus**; (b) an enhancing agent; and (c) hydrogen peroxide or a source of hydrogen peroxide.

PGPUB-DOCUMENT-NUMBER: 20020102246

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020102246 A1

TITLE: Antimicrobial compositions

PUBLICATION-DATE: August 1, 2002

INVENTOR-INFORMATION:

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Biedermann, Kirsten	Horsholm		DK	
Johansen, Charlotte	Holte		DK	

APPL-NO: 09/ 850316

DATE FILED: May 7, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60204710 20000516 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA 2000 00755	2000DK-PA 2000 00755	May 8, 2000

US-CL-CURRENT: 424/94.4, 424/401 , 510/320

ABSTRACT:

The present invention relates to an enzymatic method for killing or inhibiting microbial cells or microorganisms, e.g. in laundry, on hard surfaces, in water systems, on skin, on teeth or on mucous membranes. The present invention also relates to the use of said enzymatic composition for preserving food products, cosmetics, paints, coatings, etc.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims, under 35 U.S.C. 119, priority or the benefit of Danish application no. PA 2000 00755 filed May 8, 2000 and U.S. application no. 60/204,710 filed May 16,2000, the contents of which are fully incorporated herein by reference.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (4):

[0003] Various enzymatic **antimicr bial** compositions are known in the art. For instance, WO 94/04127 discloses stabilized dentifrice compositions which are capable of producing **antimicrobially** effective concentrations of hypothiocyanite ions. The compositions contain an oxidoreductase capable of producing hydrogen peroxide and a **peroxidase** enzyme capable of oxidizing thiocyanate ions normally present in saliva to **antimicrobial** hypothiocyanite ions. Suitable **peroxidases** include lactoperoxidase, myeloperoxidase, salivary **peroxidase** and chloroperoxidase.

Summary of Invention Paragraph - BSTX (84):
[0081] Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g., **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes (previously called Polyporus), e.g., T. versicolor (e.g. PR4 28-A).

Summary of Invention Paragraph - BSTX (90):
[0087] Particularly, a recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Summary of Invention Paragraph - BSTX (103):
[0100] Suitable examples from fungi include a laccase derivable from a strain of Aspergillus, Neurospora, e.g., N. crassa, Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes, e.g., T. villosa and T. versicolor, Rhizoctonia, e.g., R. solani, **Coprinus,** e.g., C. **cinereus,** C. comatus, C. friesii, and C. plicatilis, Psathyrella, e.g., P. condelleana, Panaeolus, e.g., P. papilionaceus, Myceliophthora, e.g., M. thermophila, Schytalidium, e.g., S. thermophilum, Polyporus, e.g., P. pinsitus, Pycnoporus, e.g. P. cinnabarinus, Phlebia, e.g., P. radita (WO 92/01046), or Coriolus, e.g., C. hirsutus (JP 2-238885).

Summary of Invention Paragraph - BSTX (105):
[0102] A laccase derived from **Coprinus,** Myceliophthora, Polyporus, Pycnoporus, Scytalidium or Rhizoctonia is preferred; in particular a laccase derived from **Coprinus cinereus,** Myceliophthora thermophila, Polyporus pinsitus, Pycnoporus cinnabarinus, Scytalidium thermophilum or Rhizoctonia solani.

Summary of Invention Paragraph - BSTX (149):
[0146] In a specific aspect, the invention provides a detergent additive comprising the **antimicrobial** composition of the invention. The detergent additive as well as the detergent composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an **oxidase,** e.g., a laccase, and/or a **peroxidase**.

Summary of Invention Paragraph - BSTX (162):
[0159] Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

Detail Description Paragraph - DETX (18):
[0185] **Antibacterial** activity of 4-aminophenol, 4-hydroxy-4'-dimethylamino azobenzene, 4,4'-biphenol, 10-methylphenoxazine and 4,4'-dihydroxydiphenyl ether was evaluated when oxidized by **Coprinus cinereus peroxidase** (rCiP) (available from Novozymes A/S).

Detail Description Table CWU - DETL (7):
7 Myceliophthora thermophila (MtL) WO 95/33836 Rhizoctonia solani (RsL) WO 95/07988 **Coprinus cinereus** (CcL) WO 97/08325 Polyporus pinsitus (PpL) WO 96/00290

Detail Description Table CWU - DETL (8):
8TABLE 7 **Antimicrobial** activity of mediators oxidized by **peroxidase.** Mediator Log.sub.10 reduction 4-amino phenol 2.5 4-hydroxy-4'-dimethylamino azobenzene 6* 4,4'biphenol 1.5 10-methylphenoxazine 3 4,4'-dihydroxydiphenyl ether 2.5 *corresponds to a total kill

Claims Text - CLTX (8):
8. The composition of claim 7, wherein the peroxidase is horseradish peroxidase, soybean peroxidase or a peroxidase enzyme derived from **Coprinus,** Bacillus, or Myxococcus.

Claims Text - CLTX (9):
9. The composition of claim 8, wherein the peroxidase is derived from **Coprinus cinereus or Coprinus** macrorhizus.

Claims Text - CLTX (13):
13. The composition of claim 12, wherein the laccase is derived from **Coprinus,** Myceliophthora, Polyporus, Pycnoporus, Scytalidium or Rhizoctonia.

Claims Text - CLTX (14):
14. The composition of claim 13, wherein the laccase is derived from **Coprinus cinereus,** Myceliophthora thermophila, Polyporus pinsitus, Pycnoporus cinnabarinus, Scytalidium thermophilum or Rhizoctonia solani.

PGPUB-DOCUMENT-NUMBER: 20020094331

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020094331 A1

TITLE: ANTIMICROBIAL COMPOSITION CONTAINING AN OXIDOREDUCTASE AND AN ENHANCER OF THER N-HYDROXYANILIDE-TYPE

PUBLICATION-DATE: July 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
JOHANSEN, CHARLOTTE	HOLTE		DK	
DEUSSEN, HEINZ-JOSEF	SOEBORG		DK	

APPL-NO: 09/ 437106

DATE FILED: November 9, 1999

CONTINUED PROSECUTION APPLICATION: This is a publication of a continued prosecution application (CPA) filed under 37 CFR 1.53(d).

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60108651 19981116 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA199801441	1998DK-PA199801441	November 9, 1998

US-CL-CURRENT: 424/94.4, 435/405

ABSTRACT:

The present invention relates to an enzymatic composition capable of killing or inhibiting microbial cells or micro-organisms, e.g. in laundry, on hard surfaces, in water systems, on skin, on teeth or on mucous membranes. The present invention also relates to the use of said enzymatic composition for preserving food products, cosmetics, paints, coatings, etc.

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Summary of Invention Paragraph - BSTX (4):

[0002] Various enzymatic **antimicrobial** compositions are known in the art. For instance, WO 94/04127 discloses stabilized dentifrice compositions which are capable of producing **antimicr bially** effective concentrations of hypothiocyanite ions. The compositions contain an oxidoreductase capable of producing hydrogen peroxide and a **peroxidase** enzyme capable of oxidizing

thiocyanate ions normally present in saliva to **antimicrobial** hypothiocyanite ions. Suitable **per xidases** include lactoperoxidase, myeloperoxidase, salivary **peroxidase** and chloroperoxidase.

Summary of Invention Paragraph - BSTX (5):
[0003] In EP-A-0 500 387 enzymatic **antimicrobial** compositions are disclosed comprising a haloperoxidase, e.g., myelo-**peroxidase,** eosinophil **oxidase,** lactoperoxidase and chloroperoxidase, which selectively binds to and inhibits the growth of target micro-organisms in the presence of peroxide and halide.

Summary of Invention Paragraph - BSTX (8):
[0006] WO 97/42825 discloses an **antimicrobial** composition comprising a **peroxidase,** a hydrogen peroxide source and an enhancing agent of the phenothiazine-type or of the acetosyringate-type.

Brief Description of Drawings Paragraph - DRTX (3):
[0016] FIG. 1 shows the **antimicrobial** activity of C. **cinereus peroxidase** against P. fluorescens. (**Peroxidase**: 3 POXU/ml, Enhancing agent: 200 .mu.M N-hydroxyacetanilide; see Example 1). .box-solid.=pH 8; .quadrature.=pH 6; ----=total kill.

Brief Description of Drawings Paragraph - DRTX (5):
[0018] FIG. 3 shows the dosis-response curve for N-hydroxyacetanilide in combination with **Coprinus** laccase (rCcL) at pH 6, 20 min and 40.degree. C. (see Example 2). --.quadrature.--=Enterococcus faecalis; --.smallcircle.--=Pseudomonas aeruginosa; .cndot..cndot..cndot..DELTA..cndot..cndot..cndot.=Enterobacter aerogenes.

Detail Description Paragraph - DETX (64):
[0081] Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g., **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes (previously called Polyporus), e.g., T. versicolor (e.g. PR4 28-A).

Detail Description Paragraph - DETX (70):
[0087] Particularly, a recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Detail Description Paragraph - DETX (83):
[0100] Suitable examples from fungi include a laccase derivable from a strain of Aspergillus, Neurospora, e.g., N. crassa, Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes, e.g., T. villosa and T. versicolor, Rhizoctonia, e.g., R. solani, **C prinus,** e.g., C. **cinereus,** C.

comatus, C. friesii, and C. plicatilis, Psathyrella, e.g., P. condelleana, Panaeolus, e.g., P. papilionaceus, Myceliophthora, e.g., M. thermophila, Schytalidium, e.g., S. thermophilum, Polyporus, e.g., P. pinsitus, Pycnoporus, e.g. P. cinnabarinus, Phlebia, e.g., P. radita (WO 92/01046), or Coriolus, e.g., C. hirsutus (JP 2-238885).

Detail Description Paragraph - DETX (85):

[0102] A laccase derived from **Coprinus,** Myceliophthora, Polyporus, Pycnoporus, Scytalidium or Rhizoctonia is preferred; in particular a laccase derived from **Coprinus cinereus,** Myceliophthora thermophila, Polyporus pinsitus, Pycnoporus cinnabarinus, Scytalidium thermophilum or Rhizoctonia solani.

Detail Description Paragraph - DETX (122):

[0139] In a specific aspect, the invention provides a detergent additive comprising the **antimicrobial** composition of the invention. The detergent additive as well as the detergent composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an **oxidase,** e.g., a laccase, and/or a **peroxidase**.

Detail Description Paragraph - DETX (136):

[0153] Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

Detail Description Paragraph - DETX (151):

[0167] **Antibacterial** Activity of **Coprinus Peroxidase** with N-Hydroxyacetanilide as Electron Donor.

Detail Description Paragraph - DETX (152):

[0168] The **antimicrobial** activity of recombinant **Coprinus cinereus peroxidase** (rCiP), obtained as described in WO 92/16634, at pH 6 and pH 8 by use of N-hydroxyacetanilide as electron donor was tested.

Detail Description Paragraph - DETX (158):

[0173] Antibacterial activity of Polyporus pinsitus laccase (rPpL), obtained as described in WO 96/00290), and **Coprinus cinereus** laccase (rCcL), obtained as described in WO 97/08325, was determined with N-hydroxyacetanilide as enhancing agent against Pseudomonas aeruginosa (ATCC 10145), Enterobacter aerogenes (ATCC 13048) and Enterococcus faecalis (DSM 2570). The bactericidal activity was determined as described in Example 1, the antimicrobial activity of rPpL (1 mg/L) was evaluated at pH 6, whereas rCcL (1 mg/L) was evaluated at pH 8.

Detail Description Paragraph - DETX (162):

[0176] **Antibacterial** activity of **C prinus cinereus peroxidase** (rCiP), Polyporus pinsitus laccase (rPpL), **Coprinus cinereus** laccase (rCcL) and Rhizoctonia solani laccase (rRsL) (as described in WO 95/07988) was determined with different enhancing agents at pH 6 and 8 (buffers; see Example 1). The rCiP was combined with 0.5 mM hydrogen peroxide.

Claims Text - CLTX (8):

8. A composition according to claim 7, wherein the peroxidase is horseradish peroxidase, soybean peroxidase or a peroxidase enzyme derived from **Coprinus,** Bacillus, or Myxococcus.

Claims Text - CLTX (9):

9. A composition according to claim 8, wherein the peroxidase is derived from **Coprinus cinereus or Coprinus** macrorhizus.

Claims Text - CLTX (13):

13. A composition according to claim 12, wherein the laccase is derived from **Coprinus,** Myceliophthora, Polyporus, Pycnoporus, Scytalidium or Rhizoctonia.

Claims Text - CLTX (14):

14. A composition according to claim 13, wherein the laccase is derived from **Coprinus cinereus,** Myceliophthora thermophila, Polyporus pinsitus, Pycnoporus cinnabarinus, Scytalidium thermophilum or Rhizoctonia solani.

PGPUB-DOCUMENT-NUMBER: 20020076790

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020076790 A1

TITLE: 2,6-beta-D-fructan hydrolase enzyme and processes for using the enzyme

PUBLICATION-DATE: June 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Moller, Soren	Holte		DK	
Johansen, Charlotte	Holte		DK	
Schafer, Thomas	Farum		DK	
Ostergaard, Peter Rahbek	Virum		DK	
Hoeck, Lisbeth Hedegaard	Skodsborg		DK	

APPL-NO: 09/ 969362

DATE FILED: October 2, 2001

RELATED-US-APPL-DATA:

child 09969362 A1 20011002

parent division-of 09397885 19990917 US GRANTED

parent-patent 6323007 US

non-provisional-of-provisional 60101615 19980924 US

non-provisional-of-provisional 60111675 19981210 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA 1998 01173	1998DK-PA 1998 01173	September 18, 1998
DK	PA 1998 01623	1998DK-PA 1998 01623	December 9, 1998

US-CL-CURRENT: 435/200, 435/101 , 435/320.1 , 435/325 , 435/69.1 , 536/23.2

ABSTRACT:

The present invention relates to isolated polypeptides having polypeptide having 2,6-.beta.-D-fructan hydrolase activity and isolated nucleic acid sequences encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional of U.S. patent application Ser. No. 09/397,885, filed on Sep. 17, 1999 (now allowed), and claims priority under 35 U.S.C. 119 of U.S. provisional patent application Nos. 60/101,615, filed on Sep. 24, 1998, and 60/111,675, filed on Dec. 10, 1998, and Danish applications Nos. PA 1998 01173, filed on Sep. 18, 1998, and PA 1998 01623, filed on Dec. 10, 1998, the contents of which are fully incorporated herein by reference.

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Detail Description Paragraph - DETX (148):

[0184] A biofilm may also suitably be removed by contacting the biofilm with the 2,6-.beta.-D-fructan hydrolases of the invention in combination with one or more other enzymes and/or active compounds. Thus the 2,6-.beta.-D-fructan hydrolases may be combined with on or more suitable hydrolases such as cellulases, hemicellulases, xylanases, amylases, lipases, proteases and/or pectinases. The 2,6-.beta.-D-fructan hydrolases of the invention may further be combined with **antimicrobial** agents such as enzymatic or non-enzymatic biocides. An enzymatic biocide may e.g. be a composition comprising an oxidoreductase, e.g. a laccase or a **peroxidase,** especially haloperoxidase, and optionally an enhancing agent such as an alkyl syringate as described in patent applications W097/42825 and DK97/1273 (not published at the filing date).

Detail Description Paragraph - DETX (155):

[0191] It is also contemplated according to the invention to include other enzyme activities than 2,6-.beta.-D-fructan hydrolase activity in the oral care composition. Contemplated enzyme activities include activities from the group of enzymes comprising dextranase, mutanases, oxidases, such as glucose oxidase, L-amino acid oxidase, peroxidases, such as e.g. the **Coprinus** sp. peroxidases described in WO 95/10602 (from Novo Nordisk A/S) or lactoperoxidase, haloperoxidases, especially haloperoxidase derivable from Curvularia sp., in particular C. verruculosa and C. inaequalis., laccases, proteases, such as papain, acidic protease (e.g. the acidic proteases described in WO 95/02044 (Novo Nordisk A/S)), endoglucosidases, lipases, amylases, including amyloglucosidases, such as AMG (from Novo Nordisk A/S), anti-microbial enzymes, and mixtures thereof.

Detail Description Paragraph - DETX (217):

[0253] Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

PGPUB-DOCUMENT-NUMBER: 20020068014

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020068014 A1

TITLE: Antibacterial agents and compositions, methods and systems employing same

PUBLICATION-DATE: June 6, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Haught, John Christian	West Chester	OH	US	
Miracle, Gregory Scot	Hamilton	OH	US	
Convents, Andre Christian	Cincinnati	OH	US	

APPL-NO: 09/ 784500

DATE FILED: February 15, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60183403 20000218 US

US-CL-CURRENT: 422/28, 510/101 , 510/199

ABSTRACT:

The present invention relates to antibacterial agents, more particularly salicylanilide substituted compositions, preferably monosubstituted salicylanilide compositions, most preferably monohalogenated salicylanilide compositions, useful in antibacterial compositions, bacteria-reducing systems, antibacterial products and bacteria-reducing methods.

CROSS REFERENCE

[0001] This application claims the benefit of U.S. Provisional Application No. 60/183,403, filed Feb. 18, 2000.

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Summary of Invention Paragraph - BSTX (211):

[0199] Examples of suitable enzymes include, but are not limited to, hemicellulases, peroxidases, proteases, cellulases, xylanases, lipases, phospholipases, esterases, cutinases, pectinases, keratanases, reductases, oxidases, phenoloxidases, lipoxygenases, ligninases, pullulanases, tannases, pentosanases, malanases, .beta.glucanases, arabinosidases, hyaluronidase, chondroitinase, laccase, mannanases, more preferably plant cell wall degrading

enzymes and non-cell wall-degrading enzymes (WO 98/39403 A) and can, more specifically, include pectinase (WO 98/06808 A, JP10088472 A, JP10088485 A); pectolyase (WO98/06805 A1); pectin lyases free from other pectic enzymes (WO9806807 A1); chondriotinase (EP 747,469 A); xylanase (EP 709,452 A, WO 98/39404 A, WO98/39402 A) including those derived from microtetraspora flexitosa (U.S. Pat. No. 5,683,911); isopeptidase (WO 98/16604 A); keratinase (EP 747,470 A, WO 98/40473 A); lipase (GB 2,297,979 A; WO 96/16153 A; WO 96/12004 A; EP 698,659 A; WO 96/16154 A); cellulase or endoglucanase (GB 2,294,269 A; WO 96/27649 A; GB 2,303,147 A; WO98/03640 A; see also neutral or alkaline cellulases derived from chrysoporium lucknowense strain VKM F-3500D as disclosed in WO9815633 A); polygalacturonase (WO 98/06809 A); mycodextranase (WO 98/13457 A); thermitase (WO 96/28558 A); cholesterol esterase (WO 98 28394 A); or any combination thereof; and known amylases; oxidoreductases; oxidases or combination systems including same (DE19523389 A1); mutant blue copper oxidases (WO9709431 A1), peroxidases (see for example U.S. Pat. No. 5,605,832, WO97/31090 A1), mannanases (WO9711164, WO 99/09126, PCT/US00/00839); xyloglucanases (WO 98/50513, PCT/US/00/00839, WO 99/02663): laccases, see WO9838287 A1 or WO9838286 A1 or for example, those laccase variants having amino acid changes in myceliophthora or scytalidium laccase(s) as described in WO9827197 A1 or mediated laccase systems as described in DE19612193 A1), or those derived from **coprinus** strains (see, for example WO9810060 A1 or WO9827198 A1), phenol oxidase or polyphenol oxidase (JP10174583 A) or mediated phenol oxidase systems (WO9711217 A): enhanced phenol oxidase systems (WO 9725468 A WO9725469 A); phenol oxidases fused to an amino acid sequence having a cellulose binding domain (WO9740127 A1, WO9740229 A1) or other phenol oxidases (WO9708325 A, WO9728257 A1) or superoxide dismutases. Oxidoreductases and/or their associated antibodies can be used, for example with H.sub.2O.sub.2, as taught in WO 98/07816 A. Depending on the type of composition, other redox-active enzymes can be used, even, for example, catalases (see, for example JP093 16490 A). Examples of these and other such suitable enzymes and/or levels of use are disclosed in U.S. Pat. Nos. 5,705,464, 5,710,115, 5,576,282, 5,728,671, 5,707,950, and WO9828400 A2.

Claims Text - CLTX (6):

5. The **antibacterial** composition according to claim 1 wherein the enzyme is selected from the group consisting of: proteases, amylases, cellulases, mannanases, xyloglucanases, pectinases, lipases, laccases, **peroxidases** and mixtures thereof.

PGPUB-DOCUMENT-NUMBER: 20020028754

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020028754 A1

TITLE: Antimicrobial compositions

PUBLICATION-DATE: March 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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APPL-NO: 09/ 899689

DATE FILED: July 5, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60220538 20000725 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA 2000 01121	2000DK-PA 2000 01121	July 21, 2000

US-CL-CURRENT: 510/302, 510/205 , 510/309 , 510/392

ABSTRACT:

The invention provides an antimicrobial composition comprising an enzymatic component and one or more non-enzymatic biocides; a method for killing or inhibiting microbial cells comprising a treatment with the antimicrobial composition; and a detergent composition comprising the antimicrobial composition. The invention provides an improved antimicrobial effect.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims, under 35 U.S.C. 119, priority or the benefit of Danish application no. PA 2000 01121 filed Jul. 21, 2000 and U.S. application Ser. No. 60/220,538 filed Jul. 25, 2000, the contents of which are fully incorporated herein by reference.

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Detail Description Paragraph - DETX (39):

[0047] Suitable examples from fungi include a laccase derivable from a strain of Aspergillus, Neurospora, e.g., N. crassa, Podospora, Botrytis,

Collybia, Fomes, Lentinus, Pleurotus, Trametes, e.g., T. villosa and T. versicolor, Rhizoctonia, e.g., R. solani, **C prinus,** e.g., C. **cinereus,** C. comatus, C. friesii, and C. plicatilis, Psathyrella, e.g., P. condelleana, Panaeolus, e.g., P. papilionaceus, Myceliophthora, e.g., M. thermophila, Schytalidium, e.g., S. thermophilum, Polyporus, e.g., P. pinsitus, Phlebia, e.g., P. radita (WO 92/01046), or Coriolus, e.g., C. hirsutus (JP 2-238885).

Detail Description Paragraph - DETX (41):

[0049] A laccase derived from **Coprinus,** Myceliophthora, Polyporus, Scytalidium or Rhizoctonia is preferred; in particular a laccase derived from **Coprinus cinereus,** Myceliophthora thermophila, Polyporus pinsitus, Scytalidium thermophilum or Rhizoctonia solani.

Detail Description Paragraph - DETX (54):

[0062] Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g., **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes (previously called Polyporus), e.g., T. versicolor (e.g. PR4 28-A).

Detail Description Paragraph - DETX (60):

[0068] Particularly, a recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Detail Description Paragraph - DETX (160):

[0167] In a specific aspect, the invention provides a detergent additive comprising the **antimicrobial** composition of the invention and a surfactant. The detergent additive as well as the detergent composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an **oxidase,** e.g., a laccase, and/or a **peroxidase**.

Detail Description Paragraph - DETX (168):

[0175] Commercially available cellulases include Celluzyme.TM., and Carezyme.TM. (Novo Nordisk A/S), Clazinase.TM., and Puradax HA.TM. (Genencor International Inc.), and KAC-500(B).TM. (Kao Corporation).
Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

PGPUB-DOCUMENT-NUMBER: 20010025018

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010025018 A1

TITLE: Antimicrobial activity of laccases

PUBLICATION-DATE: September 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
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Pedersen, Anders Hjelholt	Lyngby		DK	
Fuglsang, Claus Crone	Nivaa		DK	

APPL-NO: 09/ 746058

DATE FILED: December 22, 2000

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60101644 19980923 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	1273/97	1997DK-1273/97	November 10, 1997
DK	PA 1998 01144	1998DK-PA 1998 01144	September 10, 1998

US-CL-CURRENT: 510/305, 510/306 , 510/392

ABSTRACT:

A method for antimicrobial treatment of microorganisms and/or viruses which involves treating the microorganisms and/or viruses with an effective amount of a fungal laccase and one or more enhancers in the presence of oxygen, the enhancers having the formula: 1
wherein A, B and C are as defined in the specification.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. 119 of U.S. provisional application No. 60/101,644 filed Sep. 23, 1998 and Danish application nos. PA 1998 01144 and 1273/96 filed Sep. 10, 1998 and Nov. 10, 1997, respectively, the contents of which are fully incorporated herein by reference.

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Summary of Invention Paragraph - BSTX (4):

[0003] Various enzymatic **antimicrobial** compositions are known in the art. For instance, WO 94/04127 discloses stabilized dentifrice compositions which are capable of producing **antimicr bially** effective concentrations of hypothiocyanite ions. The compositions contain an **oxidase** capable of producing hydrogen peroxide and a **peroxidase** enzyme capable of oxidizing thiocyanate ions, which are normally present in saliva, to **antimicrobial** hypothiocyanite ions. Suitable **peroxidases** include lactoperoxidase, myeloperoxidase, salivary **peroxidase** and chloro**-peroxidase**.

Summary of Invention Paragraph - BSTX (5):

[0004] In EP-A-0 500 387 enzymatic **antimicrobial** compositions are disclosed comprising a haloperoxidase, e.g. myeloperoxidase, eosinophil **oxidase,** lactoperoxidase and chloroperoxidase, which selectively binds to and inhibits the growth of target microorganisms in the presence of peroxide and halide.

Detail Description Paragraph - DETX (24):

[0042] Further, the laccase may be a Scytalidium sp. laccase, such as the S. thermophilium laccase described in WO 95/33837 (from Novo Nordisk Biotech inc.) or a Pyricularia sp. laccase, suing as the Pyricularia oryzae laccase which can be purchased from SIGMA under the trade name SIGMA no. L5510, or a **Coprinus** sp. laccase, such as a C. **cinereus** laccase, especially a C. **cinereus** IFO 30116 laccase, or a Rhizoctonia sp. laccase, such as a Rh. Solani laccase, especially the neutral Rh. solani laccase described WO 95/07988 (from Novo Nordisk A/S) having a pH optimum in the range from 6.0 to 8.5.

Claims Text - CLTX (7):

6. The method according to claim 1, wherein the laccase is obtained from a fungus selected from the group consisting of Myceliophthera species, Polyporus species, **Coprinus** species, Rhizoctonia species, Scytalidium species and Pyricularia sp.

PGPUB-DOCUMENT-NUMBER: 20010006636

PGPUB-FILING-TYPE: new-utility

DOCUMENT-IDENTIFIER: US 20010006636 A1

TITLE: NON-AQUEOUS, LIQUID, ENZYME-CONTAINING COMPOSITIONS

PUBLICATION-DATE: July 5, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
HENRIKSEN, LOTTE RUGHOLM	VANLOSE		DK	
LYKKE, MADS	BRONSHOJ		DK	

APPL-NO: 09/ 174202

DATE FILED: October 16, 1998

CONTINUED PROSECUTION APPLICATION: CPA

RELATED-US-APPL-DATA:

child 09174202 A1 19981016

parent continuation-of PCT/DK97/00194 19970429 US UNKNOWN

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	0513/96	1996DK-0513/96	April 29, 1996
DK	0996/96	1996DK-0996/96	September 16, 1996

US-CL-CURRENT: 424/94.4, 424/94.1

ABSTRACT:

A substantially water-free, liquid, enzyme-containing composition comprises: (A) an enzyme; (B) a substance selected from (i) substances which in aqueous medium are substrates for said enzyme, (ii) substances which in aqueous medium are precursors for substrates for said enzyme, and (iii) substances which are cofactors for said enzyme; and (C) a non-aqueous liquid phase.

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Summary of Invention Paragraph - BSTX (35):

[0032] Laccases are obtainable from a variety of microbial sources, notably bacteria and fungi (including filamentous fungi and yeasts), and suitable examples of laccases are to found among those obtainable from fungi, including laccases obtainable from strains of Aspergillus, Neurospora (e.g. N. crassa),

Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes [some species/strains of which are known by various names and/or have previously been classified within other genera; e.g. Trametes villosa=T. pinsitus=Polyporus pinsitis (also known as P. pinsitus or P. villosus)=Coriolus pinsitus], Polyporus, Rhizoctonia (e.g. R. solani), **Coprinus** (e.g. C. plicatilis), Psatyrella, Myceliophthora (e.g. M. thermophila), Schytalidium, Phlebia (e.g. P. radita; see WO 92/01046), Coriolus (e.g. C. hirsutus; see JP 2-238885), Pyricularia or Rigidoporus.

Summary of Invention Paragraph - BSTX (41):
[0038] Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g. **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes versicolor (e.g. PR4 28-A).

Summary of Invention Paragraph - BSTX (48):
[0045] A suitable recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Summary of Invention Paragraph - BSTX (158):
[0155] Precursors for **disinfective** agents: The present invention makes it possible to prepare storage-stable compositions which, when brought into contact with an appropriate aqueous medium, generate an **antimicrobial** (e.g. fungicidal or bacteriocidal) substance suited for **disinfection** of a microbially contaminated locus. Such compositions will be useful, e.g., for industrial use as **disinfectants for disinfecting** microbially contaminated surfaces, areas, objects, utensils and the like, or for personal care use as **disinfectants for the disinfection** of dentures, contact lenses, skin, wounds, etc. Examples of appropriate formulations of this type are compositions comprising a **peroxidase** (EC 1.11; such as one of those classified under EC 1.11.1.7), a hydrogen peroxide precursor (e.g. one of those mentioned above in the context of enzyme substrate precursors, such as an alkali metal perborate) and an oxidizable substance [e.g. an iodide (I.sup.-) salt such as sodium or potassium iodide] which upon bringing the composition of the invention into contact with an aqueous medium (e.g. water or another aqueous diluent, or a body fluid such as serum or blood) becomes oxidized by the action of the **peroxidase/peroxide** system and generates a **disinfective** substance [e.g., in the case of an iodide salt, elemental iodine (I.sub.2) and/or triiodide (I.sub.3.sup.-)]. In the case of oxidation of iodide to iodine, a **peroxidase** classified under EC 1.1.1.8 (a so-called "iodide **peroxidase**" may also be an appropriate **peroxidase**.

Summary of Invention Paragraph - BSTX (162):
[0159] Other interesting applications of the invention in the area of personal care include applications in contact lens cleaning, in dental care and in oral hygiene: Contact lens cleaning/**disinfection** systems are frequently based on the use of a **peroxidase** in combination with hydrogen peroxide.

Following treatment of contact lenses with such a system, it is important to ensure adequate removal of the cleaning medium, particularly removal of hydrogen peroxide, from the lenses in order to avoid eye irritation or other eye damage. Employing the methodology of the present invention it is, for example, possible to prepare substantially water-free liquid compositions containing a hydrogen peroxide precursor (e.g. one of those already mentioned earlier, above) together with a catalase (EC 1.11.1.6), especially a catalase which has been formulated (e.g. by appropriate coating) as a slow-release or delayed-release product. Using such a composition in combination with a **peroxidase** for cleaning contact lenses, (a) the requisite hydrogen peroxide for the cleaning/**disinfection** process will be made available (via reaction of the hydrogen peroxide precursor which takes place in the--normally aqueous--cleaning medium), and (b) remaining hydrogen peroxide will be subsequently destroyed via the action of the catalase which is released into the cleaning medium.

Summary of Invention Paragraph - BSTX (163):

[0160] With respect to dental care and oral hygiene applications of the invention, particularly interesting aspects include whitening (bleaching) of teeth and oral **disinfection** using formulations (e.g. toothpastes, or liquid concentrates which can be diluted in water to give a mouthwash or the like) which constitute substantially water-free compositions of the invention and which, in use, produce hydrogen peroxide. For such purposes, particularly suitable compositions include those containing a hydrogen peroxide generating system comprising a combination of (i) an **oxidase** enzyme which employs oxygen (e.g. oxygen in the atmosphere) as acceptor and which, in combination with an appropriate substrate, generates hydrogen peroxide, and (ii) a substrate appropriate therefor.

Summary of Invention Paragraph - BSTX (167):

[0164] A dental care/oral care composition (composition according to the invention) comprising such a hydrogen peroxide generating system may suitably further comprise a **peroxidase**, e.g. for the purpose of further enhancing the oxidative effect (bleaching/whitening/**disinfection** effect) which is achieved by the hydrogen peroxide released.

US-PAT-NO: 6537546

DOCUMENT-IDENTIFIER: US 6537546 B2

TITLE: Process for macromolecularizing phenolic compounds etc. and use thereof

DATE-ISSUED: March 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Echigo; Takashi	Chiba	N/A	N/A	JP
Ohno; Ritsuko	Tokyo	N/A	N/A	JP

APPL-NO: 09/ 742217

DATE FILED: December 22, 2000

PARENT-CASE:

This is a divisional application of application Ser. No. 09/202,041, filed Dec. 7, 1998, and issued on Feb. 20, 2001, as U.S. Pat. No. 6,190,891, the disclosure of which is incorporated herein by reference, which is a 371 of PCT/JP 97/01694 filed May 20,1997.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	8/144200	June 6, 1996

US-CL-CURRENT: 424/94.4, 435/128 , 435/189 , 435/254.1 , 435/911

ABSTRACT:

A process for macromolecularizing phenolic compounds or aromatic amine compounds by the action of a catalyst comprising an enzyme having a polyphenol oxidizing activity in the alkali region; applications of the compounds obtained by the above process to thickeners, stabilizers, coagulants, emulsifiers, dispersants, water retainers, antioxidants, adhesives, concrete admixtures, dyes, coating materials, petroleum recovering agent, soil conditioner, a blow-applied seed bearing surface soil stabilizer, deodorants, smell eliminators, agricultural chemical spreaders, feeding stuff binders, bactericides, antimicrobial agents, viral infection inhibitors, bioadhesion preventives, biotic repellents, insecticides, poultices, ink bases or wood treating agents; and method of waste water disposal, a method of deoxygenation and a method of treating wood, concrete or soil in which use is made of the above reaction.

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

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Brief Summary Text - BSTX (18):

Accordingly, the present invention provides the followings: 1) A process of producing phenolic compounds or aromatic amine compounds having increased molecular weights, characterized by comprising allowing an enzyme having a polyphenol oxidizing activity to act on phenolic compounds or aromatic amine compounds in the alkaline pH region to macromolecularize them. 2) The process as described in 1) above, characterized in that the macromolecularization is carried out in the alkaline pH region of not lower than pH 8. 3) The process as described in 1) or 2) above, characterized in that as the enzyme having a polyphenol oxidizing activity is used one or more of catechol **oxidase,** laccase, polyphenol **oxidase,** ascorbic acid **oxidase** or bilirubin **oxidase**. 4) The process as described in any one of 1) to 3), wherein use is made of an enzyme having a polyphenol oxidizing activity obtained by cultivating a bacterium belonging to the genus Bacillus. 5) The process as described in 4) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme obtained by cultivating Bacillus licheniformis or Bacillus natto. 6) The process as described in 5) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme obtained by cultivating Bacillus licheniformis SD3003 (Accession No. FERM BP-5801). 7) The process as described in any one of 1) to 3) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme obtained by cultivating a fungus belonging to the genus Myrothecium. 8) The process as described in 7) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme obtained by cultivating Myrothecium verrucaria or Myrothecium roridum. 9) The process as described in 8) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme obtained by cultivating Myrothecium verrucaria SD3001 (Accession No. FERM BP-5520) or Myrothecium roridum SD3002 (Accession No. FERM BP-5523). 10) The process as described in any one of 1) to 9) above, wherein the enzyme having a polyphenol oxidizing activity is an enzyme which has an optimal reaction pH in the alkaline region of not lower than pH 7.5 when the activity thereof is measured with syringaldazine. 11) The process as described in any one of 1) to 10) above, wherein the phenolic compound is lignin or a lignin derivative. 12) The process as described in 11) above, wherein the lignin derivative is lignosulfonic acid. 13) The process as described in any one of 1 to 10) above, wherein the phenolic compound is flavonoid. 14) The process as described in any one of 1) to 13) above, characterized in that the macromolecularization reaction is carried out by adding one or more of a quinone compound, unsaturated fatty acid, unsaturated alcohol or an unsaturated alkyl compound to the phenolic compound or aromatic amine compound. 15) The process as described in any one of 1) to 14) above, wherein an **antimicrobial** compound, an antiviral compound, a biotic repellent compound, an insecticidal compound or a metal ion coexists. 16) The process as described in any one of 1) to 15) above, wherein the macromolecularization is carried out at a temperature of 0 to 100.degree. C. 17) Thickeners, stabilizers, coagulants, emulsifiers, dispersants, water retainers, antioxidants, adhesives, concrete admixtures, dyes, coating materials, petroleum recovering agents, soil conditioners, blow-applied seed bearing surface soil stabilizers, deodorants, smell eliminators, agricultural chemical spreaders, feeding stuff binders, bactericides, **antimicrobial** agents,

viral infection inhibitors, bioadhesion preventives, biotic repellents, insecticides, poultices, ink bases or wood treating agents, comprising macromolecular compound produced by the process as described in any one of 1) to 16) above. 18) A process of producing thickeners, stabilizers, coagulants, emulsifiers, dispersants, water retainers, antioxidants, adhesives, concrete admixtures, dyes, coating materials, petroleum recovering agents, soil conditioners, blow-applied seed bearing surface soil stabilizers, deodorants, smell eliminators, agricultural chemical spreaders, feeding stuff binders, bactericides, **antimicrobial** agents, viral infection inhibitors, bioadhesion preventives, biotic repellents, insecticides, poultices, ink bases or wood treating agents, comprising the step of macromolecularizing the phenolic compounds or aromatic amine compounds as described in any one of 1) to 16) above. 19) A method of disposing of waste water, characterized by comprising macromolecularizing phenolic compounds or aromatic amine compounds in waste water in accordance with the method as described in any one of 1) to 16) above and removing it from the waste water. 20) A deoxygenating agent for use in the alkaline pH region, characterized by comprising a phenolic compound or aromatic amine compound and the enzyme having a polyphenol oxidizing activity as described in any one of 1) to 16) above. 21) A method of treating wood, characterized by comprising impregnating wood with an enzyme having a polyphenol oxidizing activity together with a phenolic compound or aromatic amine compound and macromolecularizing the phenolic compound or aromatic amine compound in the wood. 22) A method of treating concrete, characterized by comprising adding to concrete an enzyme having a polyphenol oxidizing activity together with a phenolic compound or aromatic amine compound and macromolecularizing the phenolic compound or aromatic amine compound in the concrete. 23) A method of treating soil, characterized by comprising adding to soil an enzyme having a polyphenol oxidizing activity together with a phenolic compound or aromatic amine compound and macromolecularizing the phenolic compound or aromatic amine compound in the soil.

Brief Summary Text - BSTX (25):

Other preferred fungi include those strains which belong to the genera falling in Basidiomycotina, i.e., Pleurotus, Lentinus, Schizophyllum, Armillariella, Flammulina, Agaricus, **Coprinus,** Phanerochaete, Phlebia, Lenzites, Melanoleuca, Pholiota, Stereumu, Polyporus, Polyporelius, Microporus, Fomitopsis, Pycnoporus, Trametes, Coriolus, Daedaleopsis, Rigidoporus, Fomes, Ganoderma, Trachyderma, Hymenochaete, and Inonotus, preferably Pleurotus cornucopiae, Pleurotus osteratus, Lentinus edodes, Schizophyllum commune, Armillariella mellea, Flammulina velutipes, Agaricus bisporus, **Coprinus** comatus, **Coprinus cinereus, Coprinus** congregatus, Phanerochaete chrysosporium, Phlebia radiata, Lenzites betulina, Melanoleuca verrucipes, Pholiota nameko, Stereumu hirsutum, Polyporus squamosus, Polyporellus badius, Microporus flabelliformis, Fomitopsis pinicola, Pycnoporus coccineus, Trametes orientalis, Coriolus versicolor, Coriolus hirsutus, Daedaleopsis tricolor, Rigidoporus zonalis, Fomes fomentarius, Ganoderma lucidum, Trachyderma tsunodae, Hymenochaete rubiginosa, and Inonotus mikadoi.

US-PAT-NO: 6524827

DOCUMENT-IDENTIFIER: US 6524827 B2

TITLE: 2,6-.beta.-D-fructan hydrolase enzyme and processes for using the enzyme

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Moller; Soren	Holte	N/A	N/A	DK
Johansen; Charlotte	Holte	N/A	N/A	DK
Schafer; Thomas	Farum	N/A	N/A	DK
Ostergaard; Peter Rahbek	Virum	N/A	N/A	DK
Hoeck; Lisbeth Hedegaard	Skodsborg	N/A	N/A	DK

APPL-NO: 09/ 969362

DATE FILED: October 2, 2001

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a divisional of U.S. patent application Ser. No. 09/397,885, filed on Sep. 17, 1999 (now U.S. Pat. No. 6,323,007) and claims priority under 35 U.S.C. 119 of U.S. provisional patent application No. 60/101,615, filed on Sep. 24, 1998, and No. 60/111,657, filed on Dec. 10, 1998, and Danish applications nos. PA 1998 01173, filed on Sep. 18, 1998, and PA 1998 01623, filed on Dec. 10, 1998, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1998 01173	September 18, 1998
DK	1998 01623	December 9, 1998

US-CL-CURRENT: 435/74, 435/183 , 435/252.3 , 435/252.33 , 435/320.1 , 536/23.2

ABSTRACT:

The present invention relates to isolated polypeptides having polypeptide having 2,6-.beta.-D-fructan hydrolase activity and isolated nucleic acid sequences encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides.

16 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

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Detailed Description Text - DETX (129):
A biofilm may also suitably be removed by contacting the biofilm with the 2,6-.beta.-D fructan hydrolases of the invention in combination with one or more other enzymes and/or active compounds. Thus the 2,6-.beta.-D-fructan hydrolases may be combined with on or more suitable hydrolases such as cellulases, hemicellulases, xylanases, amylases, lipases, proteases and/or pectinases. The 2,6-.beta.-D-fructan hydrolases of the invention may further be combined with **antimicrobial** agents such as enzymatic or non-enzymatic biocides. An enzymatic biocide may e.g. be a composition comprising an oxidoreductase, e.g. a laccase or a **peroxidase,** especially haloperoxidase, and optionally an enhancing agent such as an alkyl syringate as described in patent applications WO97/42825 and DK97/1273 (not published at the filing date).

Detailed Description Text - DETX (136):
It is also contemplated according to the invention to include other enzyme activities than 2,6-.beta.-D-fructan hydrolase activity in the oral care composition. Contemplated enzyme activities include activities from the group of enzymes comprising dextranase, mutanases, oxidases, such as glucose oxidase, L-amino acid oxidase, peroxidases, such as e.g. the **Coprinus** sp. peroxidases described in WO 95/10602 (from Novo Nordisk A/S) or lactoperoxi-dase, haloperoxidases, especially haloperoxidase derivable from Curvularia sp., in particular C. verruculosa and C. inaequalis., laccases, proteases, such as papain, acidic protease (e.g. the acidic proteases described in WO 95/02044 (Novo Nordisk A/S)), endoglucosidases, lipases, amylases, including amyloglucosidases, such as AMG (from Novo Nordisk A/S), anti-microbial enzymes, and mixtures thereof.

Detailed Description Text - DETX (177):
Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

US-PAT-NO: 6355461

DOCUMENT-IDENTIFIER: US 6355461 B2

TITLE: Non-aqueous, liquid, enzyme-containing compositions

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Henriksen; Lotte Rugholm	Vanl.o slashed.se	N/A	N/A	DK
Lykke; Mads	Br.o slashed.nsh.o slashed.j	N/A	N/A	DK

APPL-NO: 09/ 174202

DATE FILED: October 16, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a contination application of Ser. No. PCT/DK97/00194, filed on Apr. 29, 1997, and claims priority under 35 U.S.C. 119 of Danish application 0996/96, filed Sep. 16, 1996 and application No. 0513/96, filed Apr. 29, 1996, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	0513/96	April 29, 1996
DK	0996/96	September 16, 1996

US-CL-CURRENT: 435/189, 435/267

ABSTRACT:

A substantially water-free, liquid, enzyme-containing composition comprises: (A) an enzyme; (B) a substance selected from (i) substances which in aqueous medium are substrates for said enzyme, (ii) substances which in aqueous medium are precursors for substrates for said enzyme, and (iii) substances which are cofactors for said enzyme; and (C) a non-aqueous liquid phase.

5 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

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Brief Summary Text - BSTX (35):

Laccases are obtainable from a variety of microbial sources, notably bacteria and fungi (including filamentous fungi and yeasts), and suitable examples of laccases are to found among those obtainable from fungi, including laccases obtainable from strains of Aspergillus, Neurospora (e.g. N. crassa), Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes [some species/strains of which are known by various names and/or have previously been classified within other genera; e.g. Trametes villosa=T. pinsitus=Polyporus pinsitis (also known as P. pinsitus or P. villosus)=Coriolus pinsitus], Polyporus, Rhizoctonia (e.g. R. solani), **Coprinus** (e.g. C. plicatilis), P. satyrella, Myceliophthora (e.g. M. thermophila), Schytaldium, Phlebia (e.g. P. radita; see WO 92/01046), Coriolus (e.g. C.hirsutus; see JP 2-238885), Pyricularia or Rigidoporus.

Brief Summary Text - BSTX (41):

Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g. **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes versicolor (e.g. PR4 28-A).

Brief Summary Text - BSTX (48):

A suitable recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634.

Brief Summary Text - BSTX (156):

Precursors for **disinfective** agents: The present invention makes it possible to prepare storage-stable compositions which, when brought into contact with an appropriate aqueous medium, generate an **antimicrobial** (e.g. fungicidal or bacteriocidal) substance suited for **disinfection** of a microbially contaminated locus. Such compositions will be useful, e.g., for industrial use as **disinfectants for disinfecting** microbially contaminated surfaces, areas, objects, utensils and the like, or for personal care use as **disinfectants for the disinfection** of dentures, contact lenses, skin, wounds, etc. Examples of appropriate formulations of this type are compositions comprising a **peroxidase** (EC 1.11; such as one of those classified under EC 1.11.1.7), a hydrogen peroxide precursor (e.g. one of those mentioned above in the context of enzyme substrate precursors, such as an alkali metal perborate) and an oxidizable substance [e.g. an iodide (I.sup.-) salt such as sodium or potassium iodide] which upon bringing the composition of the invention into contact with an aqueous medium (e.g. water or another aqueous diluent, or a body fluid such as serum or blood) becomes oxidized by the action of the **peroxidase/peroxide** system and generates a **disinfective** substance [e.g., in the case of an iodide salt, elemental iodine (I.sub.2) and/or triiodide (I.sub.3.sup.-)]. In the case of oxidation of iodide to iodine, a **peroxidase** classified under EC 1.1.1.8 (a

so-called "iodide **peroxidase**" may also be an appropriate **peroxidase**.

Brief Summary Text - BSTX (160):

Other interesting applications of the invention in the area of personal care include applications in contact lens cleaning, in dental care and in oral hygiene: Contact lens cleaning/**disinfection** systems are frequently based on the use of a **peroxidase** in combination with hydrogen peroxide. Following treatment of contact lenses with such a system, it is important to ensure adequate removal of the cleaning medium, particularly removal of hydrogen peroxide, from the lenses in order to avoid eye irritation or other eye damage. Employing the methodology of the present invention it is, for example, possible to prepare substantially water-free liquid compositions containing a hydrogen peroxide precursor (e.g. one of those already mentioned earlier, above) together with a catalase (EC 1.11.1.6), especially a catalase which has been formulated (e.g. by appropriate coating) as a slow-release or delayed-release product. Using such a composition in combination with a **peroxidase** for cleaning contact lenses, (a) the requisite hydrogen peroxide for the cleaning/**disinfection** process will be made available (via reaction of the hydrogen peroxide precursor which takes place in the--normally aqueous--cleaning medium), and (b) remaining hydrogen peroxide will be subsequently destroyed via the action of the catalase which is released into the cleaning medium.

Brief Summary Text - BSTX (161):

With respect to dental care and oral hygiene applications of the invention, particularly interesting aspects include whitening (bleaching) of teeth and oral **disinfection** using formulations (e.g. toothpastes, or liquid concentrates which can be diluted in water to give a mouthwash or the like) which constitute substantially water-free compositions of the invention and which, in use, produce hydrogen peroxide. For such purposes, particularly suitable compositions include those containing a hydrogen peroxide generating system comprising a combination of (i) an **oxidase** enzyme which employs oxygen (e.g. oxygen in the atmosphere) as acceptor and which, in combination with an appropriate substrate, generates hydrogen peroxide, and (ii) a substrate appropriate therefor.

Brief Summary Text - BSTX (165):

A dental careloral care composition (composition according to the invention) comprising such a hydrogen peroxide generating system may suitably further comprise a **peroxidase,** e.g. for the purpose of further enhancing the oxidative effect (bleaching/whitening/**disinfection** effect) which is achieved by the hydrogen peroxide released.

US-PAT-NO: 6323007

DOCUMENT-IDENTIFIER: US 6323007 B1

TITLE: 2,6-.beta.-D-fructan hydrolase enzyme and processes for using the enzyme

DATE-ISSUED: November 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Moller; Soren	Holte	N/A	N/A	DK
Johansen; Charlotte	Holte	N/A	N/A	DK
Schafer; Thomas	Farum	N/A	N/A	DK
Ostergaard; Peter Rahbek	Virum	N/A	N/A	DK
Hoeck; Lisbeth Hedegaard	Skodsborg	N/A	N/A	DK

APPL-NO: 09/ 397885

DATE FILED: September 17, 1999

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish application nos. PA 1998 01173 filed on Sep. 18, 1998 and PA 1998 01623 filed on Dec. 9, 1998, and U.S. Provisional application Nos. 60/101,615 filed on Sep. 24, 1998 and 60/111,675 filed on Dec. 10, 1998, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1998 01173	September 18, 1998
DK	1998 01623	December 9, 1998

US-CL-CURRENT: 435/74, 435/200 , 435/252.33 , 435/262 , 435/274 , 435/320.1

ABSTRACT:

The present invention relates to isolated polypeptides having polypeptide having 2,6-.beta.-D-fructan hydrolase activity and isolated nucleic acid sequences encoding the polypeptides. The invention also relates to nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides.

10 Claims, 8 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 8

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Detailed Description Text - DETX (149):

A biofilm may also suitably be removed by contacting the biofilm with the 2,6-.beta.-D-fructan hydrolases of the invention in combination with one or more other enzymes and/or active compounds. Thus the 2,6-.beta.-D-fructan hydrolases may be combined with on or more suitable hydrolases such as cellulases, hemicellulases, xylanases, anylases, lipases, proteases and/or pectinases. The 2,6-9-.beta.-fructan hydrolases of the invention may further be combined with **antimicrobial** agents such as enzymatic or non-enzymatic biocides. An enzymatic biocide may e.g. be a composition comprising an oxidoreductase, e.g. a laccase or a **peroxidase,** especially haloperoxidase, and optionally an enhancing agent such as an alkyl syringate as described in patent applications WO97/42825 and DK97/1273 (not published at the filing date).

Detailed Description Text - DETX (156):

It is also contemplated according to the invention to include other enzyme activities than 2,6-.beta.-D-fructan hydrolase activity in the oral care composition. Contemplated enzyme activities include activities from the group of enzymes comprising dextranase, mutanases, oxidases, such as glucose oxidase, L-amino acid oxidase, peroxidases, such an e.g. the **Coprinus** sp. peroxidases described in WO 95/10602 (from Novo Nordisk A/S) or lactoperoxidase, haloperoxidases, especially haloperoxidase derivable from Curvularia sp., in particular C. verruculosa and C. inaequalis., laccases, proteases, such as papain, acidic protease (e.g. the acidic proteases described in WO 95/02044 (Novo Nordisk A/S)), endoglucosidases, lipases, amylases, including amyloglucosidases, such as AMG (from Novo Nordisk A/S), anti-microbial enzymes, and mixtures thereof.

Detailed Description Text - DETX (219):

Peroxidases/Oxidases: Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically modified or protein engineered mutants are included. Examples of useful peroxidases include peroxidases from **Coprinus,** e.g. from C. **cinereus,** and variants thereof as those described in WO 93/24618, WO 95/10602, and WO 98/15257.

US-PAT-NO: 6287585

DOCUMENT-IDENTIFIER: US 6287585 B1

TITLE: Methods for laundry using polycations and enzymes

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johansen; Charlotte	Holte	N/A	N/A	DK

APPL-NO: 09/ 143622

DATE FILED: August 28, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation application of PCT/DK97/00098 filed Mar. 5, 1997 and claims priority under 35 U.S.C. 119 of Danish application 0262/96 filed Mar. 6, 1996, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	0262/96	March 6, 1996

US-CL-CURRENT: 424/405, 510/276 , 510/300 , 510/360 , 510/530

ABSTRACT:

The present invention provides a method of killing or inhibiting the growth of microbial cells present on laundry, comprising contacting the cells with a composition comprising a poly-cationic compound, preferably a polyamino acid, a polyvinylamine, a copolymer prepared from vinylamine and one or more carboxylic acid anhydrides, e.g. a polymer comprising 0.1-100 mol % vinyl amine or ethyleneimine units, 0-99.9 mol % units of at least one monomer selected from N-vinylcarboxamides of the formula I ##STR1##

wherein R.sup.1 and R.sup.2 are hydrogen or C.sub.1 -C.sub.6 -alkyl;

vinyl formate, vinyl acetate, vinyl propionate, vinyl alcohol, C.sub.1 -C.sub.6 -alkyl vinyl ether, mono ethylenic unsaturated C.sub.3 -C.sub.8 -carboxylic acid, and esters, nitrites, amides and anhydrides thereof, N-vinylurea, N-imidazoles and N-vinyl imidazolines; and

0-5 mol % units of monomers having at least two unsaturated ethylenic double bonds;

and one or more enzymes, preferably glycanases, muranases, oxidoreductases, glucanases, proteases, amylases, lipases, pectinases and xylanases.

8 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

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Brief Summary Text - BSTX (3):

At this time of increased public interest in reducing the use of chemical additives, it is relevant to consider natural alternatives for **antimicrobial** agents used e.g. for preserving foods and cosmetics, as **disinfectants, and as an antimicrobial** ingredient of detergent and cleaning compositions. This has increased interest in preservation using live bacterial cultures (Jeppesen & Huss 1993) and enzymes like lactoperoxidase (Farrag & Marth 1992), glucose **oxidase** (Jeong et al. 1992) and lysozyme (Johansen et al. 1994).

Brief Summary Text - BSTX (25):

Laccases are enzymes that catalyze the oxidation of a substrate with oxygen, they are known from microbial, plant and animal origins. More specifically, laccases (EC 1.10.3.2) are oxidoreductases that function with molecular oxygen as electron acceptor. Molecular oxygen from the atmosphere will usually be present in sufficient quantity, so normally it is not necessary to add extra oxygen to the process medium. Examples of a laccase enzyme useful in the compositions of the present invention is laccase obtainable from the strain **Coprinus cinereus,** IFO 30116, or from a laccase having immunochemical properties identical to those of a laccase derived from **Coprinus cinereus,** IFO 30116; or obtainable from a strain of Myceliophthora thermophila as disclosed in WO 91/05839.

Brief Summary Text - BSTX (34):

Another enzyme which may be useful in the method of the present invention is a microbial lipase. As such, the lipase may be selected from yeast, e.g. Candida, lipases, bacterial, e.g. Pseudomonas or Bacillus, lipases; or fungal, e.g. Humicola or Rhizomucor, lipases. More specifically, suitable lioases may be the Rhizomucor miehei lipase (e.g. prepared as described in EP 238 023), Thermomyces lanuginosa lipase e.g. prepared as described in EP 305 216 (available from Novo Nordisk under the trade name Lipolase.TM.), Humicola insolens lipase, Pseudomonas stutzeri lipase, Pseudomonas cepacia lipase, Candida antarctica lipase A or B, or lipases from rGPL, Absidia blakesleena, Absidia corymifera, Fusarium solanil, Fusarium oxysporum, Penicillum cyclopium, Penicillum crustosum, Penicillum expansum, Rhodotorula glutinis, Thiarosporella phaseolina, Rhizopus microsporus, Sporobolomyces shibatanus, Aureobasidium pullulans, Fansenula anomala, Geotricum penicillaturn, Lactobacillus curvatus, Brochothrix thermosohata, **Coprinus** cinerius, Trichoderma harzanium, Trichoderma

reesei, Rhizopus japonicus or Pseudomonas plantari. Other examples of suitable lipases may be variants of any one of the lipases mentioned above, e.g. as described in WO 92/05249 or WO 93/11254.

Detailed Description Text - DETX (41):

Jeong, D. K., Harrison, M. A., Frank, J. F. & Wicker, L. 1992 Trials on the **antibacterial** effect of glucose **oxidase** on chicken breast skin and muscle. Journal of Food safety 13, 43-49.

US-PAT-NO: 6228128

DOCUMENT-IDENTIFIER: US 6228128 B1

TITLE: Antimicrobial activity of laccases

DATE-ISSUED: May 8, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johansen; Charlotte	DK-2840 Holte	N/A	N/A	DK
Pedersen; Anders Hjelholt	DK-2800 Lyngby	N/A	N/A	DK
Fuglsang; Claus Crone	2990 Nivaa	N/A	N/A	DK

APPL-NO: 09/ 184419

DATE FILED: November 2, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a 37 C.F.R. .sctn. 1.53(b) divisional application of U.S. Ser. No. 09/184,418 filed Nov. 2, 1998. The benefit of which is claimed under 35 U.S.C. 120.

This application claims priority under 35 U.S.C. 119 of U.S. provisional application 60/101,644 filed Sep. 23, 1998 and Danish application nos. PA 1998 01144 and 1273/96 filed Sep. 10, 1998 and Nov. 10, 1997, respectively, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1273/97	November 10, 1997
DK	1998 01144	September 10, 1998

US-CL-CURRENT: 8/137, 134/42 , 422/28 , 424/78.03 , 424/78.07 , 510/114 , 510/131 , 510/137 , 510/161 , 510/226 , 510/320 , 510/321 , 510/392 , 510/530

ABSTRACT:

A method for antimicrobial treatment of microorganisms and/or viruses which involves treating the microorganisms and/or viruses with an effective amount of a fungal laccase and one or more enhancers in the presence of oxygen, the enhancers having the formula: ##STR1##

wherein A, B and C are as defined in the specification.

20 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

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Brief Summary Text - BSTX (4):
Various enzymatic **antimicrobial** compositions are known in the art. For instance, WO 94/04127 discloses stabilized dentifrice compositions which are capable of producing **antimicrobially** effective concentrations of hypothiocyanite ions. The compositions contain an **oxidase** capable of producing hydrogen peroxide and a **peroxidase** enzyme capable of oxidizing thiocyanate ions, which are normally present in saliva, to **antimicrobial** hypothiocyanite ions. Suitable **peroxidases** include lactoperoxidase, myeloperoxidase, salivary **peroxidase** and chloro-**peroxidase**.

Brief Summary Text - BSTX (5):
In EP-A-0 500 387 enzymatic **antimicrobial** compositions are disclosed comprising a haloperoxidase, e.g. myeloperoxidase, eosinophil **oxidase,** lactoperoxidase and chloroperoxidase, which selectively binds to and inhibits the growth of target microorganisms in the presence of peroxide and halide.

Detailed Description Text - DETX (23):
Further, the laccase may be a Scytalidium sp. laccase, such as the S. thermophilium laccase described in WO 95/33837 (from Novo Nordisk Biotech inc.) or a Pyricularia sp. laccase, such as the Pyricularia oryzae laccase which can be purchased from SIGMA under the trade name SIGMA no. L5510, or a **Coprinus** sp. laccase, such as a C. **cinereus** laccase, especially a C. **cinereus** IFO 30116 laccase, or a Rhizoctonia sp. laccase, such as a Rh. solani laccase, especially the neutral Rh. solani laccase described WO 95/07988 (from Novo Nordisk A/S) having a pH optimum in the range from 6.0 to 8.5.

Claims Text - CLTX (8):
5. The method according to claim 1, wherein the laccase is obtained from a fungus selected from the group consisting of Myceliophthera species, Polyporus species, **Coprinus** species, Rhizoctonia species, Scytalidium species and Pyricularia sp.

US-PAT-NO: 6201110

DOCUMENT-IDENTIFIER: US 6201110 B1

TITLE: Polypeptide with reduced respiratory allergenicity

DATE-ISSUED: March 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Olsen; Arne Agerlin	Virum	N/A	N/A	DK
Hansen; Lars Bo	Herlev	N/A	N/A	DK
Beck; Thomas Christian	Birker.o slashed.d	N/A	N/A	DK

APPL-NO: 09/ 610751

DATE FILED: July 6, 2000

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 09/405,311 filed Sep. 20, 1999, now U.S. Pat. No. 6,114,509 which is a continuation of 09/150,891, filed Sep. 10, 1998, (now U.S. Pat. No. 5,981,718), which is a continuation of application Ser. No. 08/836,293 filed May 12, 1997 (now U.S. Pat. No. 5,856,451), which is a continuation of PCT/DK95/00497, filed Dec. 7, 1995, and claims priority under 35 U.S.C. 119 of Danish applications serial numbers 1395/94, 1396/94, 1397/94, 1398/94, 1399/94, 1400/94, and 1401/94, all of which were filed on Dec. 7, 1994, the contents of which are hereby incorporated by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1395/94	December 7, 1994
DK	1396/94	December 7, 1994
DK	1397/94	December 7, 1994
DK	1398/94	December 7, 1994
DK	1399/94	December 7, 1994
DK	1400/94	December 7, 1994
DK	1401/94	December 7, 1994

US-CL-CURRENT: 530/402, 435/189 , 435/190 , 530/350 , 530/403

ABSTRACT:

The invention relates to modified polypeptides with reduced respiratory allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are

produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to compositions comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, composition for treating textiles, and compositions used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or compositions thereof for reducing the allergenicity of products for a vast number of industrial applications.

14 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

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Detailed Description Text - DETX (52):
Said Laccases may be derived from Polyporus pinsitus, Myceliophtora thermophila, **Coprinus cinereus,** Rhizoctonia solani, Rhizoctonia praticola, Scytalidium thermophilum and Rhus vernicifera.

Detailed Description Text - DETX (54):
The Peroxidase may be derived from e.c. Soy bean, Horseradish or **Coprinus cinereus**.

Detailed Description Text - DETX (196):
The most common oxidoreductase for personal care purposes is an **oxidase** (usually glucose **oxidase**) with substrate (e.g. glucose) that ensures production of H.sub.2 O.sub.2, which then will initiate the oxidation of for instance SCN or I.sup.- into **antimicrobial** reagents (SCNO.sup.- or I.sub.2) by a **peroxidase** (usually lactoperoxidase). This enzymatic complex is known in nature from e.g. milk and saliva.

Detailed Description Text - DETX (310):
Coprinus cinereus peroxidase (available from Novo Nordisk A/S on request).

Detailed Description Text - DETX (432):
Conjugation of **Coprinus cinereus** peroxidase with N-succinimidyl carbonate activated mPEG 15.000

US-PAT-NO: 6165761

DOCUMENT-IDENTIFIER: US 6165761 A

TITLE: Carbohydrate oxidase and use thereof in baking

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schneider; Palle	Ballerup	N/A	N/A	DK
Christensen; S.o slashed.ren	Copenhagen	N/A	N/A	DK
Dybdal; Lone	K.o slashed.benhavn	N/A	N/A	DK
Fuglsang; Claus Crone	Niv.ang.	N/A	N/A	DK
Xu; Feng	Woodland	CA	N/A	N/A
Golightly; Elizabeth	Davis	CA	N/A	N/A

APPL-NO: 09/ 217490

DATE FILED: December 21, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish applications PA 1997 01505 filed Dec. 22, 1997 and PA 1998 00763 filed Jun. 4, 1998, and of U.S. provisional application No. 60/068,717 filed Dec. 23, 1997 and provisional application No. 60/088,725 filed Jun. 10, 1998, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	01505/97	December 22, 1997
DK	1998 00763	June 4, 1998

US-CL-CURRENT: 435/190, 435/195 , 435/197 , 435/198 , 435/200 , 435/201 , 435/202 , 435/203 , 435/204 , 435/209

ABSTRACT:

The properties of dough or bread can be improved by the addition of a carbohydrate oxidase which can oxidize the reducing end of an oligosaccharide more efficiently than the corresponding monosaccharide, e.g., preferentially oxidizing maltodextrins or cellodextrins over glucose. A novel carbohydrate oxidase having the capability to oxidize maltodextrins and cellodextrins more efficiently than glucose may be obtained from a strain of Microdochium, particularly M. nivale. The amino acid sequence of the novel carbohydrate oxidase has very low homology (<20% identity) with known amino acid sequences.

13 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

---------- KWIC ---------

Detailed Description Text - DETX (140):
In addition to the us in baking, discussed above, the carbohydrate **oxidase** may be used, for example, in personal care products such as toothpaste, in particular, where whitening of the teeth is desirable, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations, and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The carbohydrate **oxidase** may also be a component of a laundry detergent composition or a dishwashing detergent composition and may be used for the generation of hydrogen peroxide. The laundry detergent composition may comprise a surfactant, said carbohydrate **oxidase** and a substrate for the carbohydrate **oxidase**. The dishwashing detergent composition may comprise said carbohydrate **oxidase** and a bleach precursor or peroxy acid, and a substrate for carbohydrate **oxidase**.

Detailed Description Text - DETX (148):
4 mg/ml recombinant **Coprinus cinereus** peroxidase (rCiP)

Detailed Description Text - DETX (210):
Samples of 500 .mu.l were removed at days 3, 5, and 7 from each flask and assayed for carbohydrate oxidase activity. Carbohydrate oxidase activity was measured in a 96 well plate containing 10 .mu.l of supernatant followed by the addition of 1 .mu.l of o-anisidine, 69 .mu.l of Britton and Robinson buffer pH 6.0, 10 .mu.l of 1 M D-glucose, and 10 .mu.l of **Coprinus cinereus** peroxidase (3.76 PODU/ml), obtained as described in WO 92/16634. The activity was measured at 405 nm for 10 minutes in mOD/min. The transformants all produced detectable carbohydrate oxidase activity. The addition of riboflavin 5'-phosphate to the shake flasks had a minor effect on increasing activity. Samples of 20 .mu.l from the highest carbohydrate oxidase producers were run on an 8-16% Tris-Glycine gel (Novex, San Diego, Calif.) which confirmed the production of carbohydrate oxidase.

Detailed Description Text - DETX (231):
Assuming that the oxidation of each D-glucose molecule was coupled to the reduction of one O.sub.2 to H.sub.2 O.sub.2, recombinant carbohydrate oxidase activity was measured using a Hansatech O.sub.2 electrode as described in Example 10. The recombinant carbohydrate oxidase oxidized D-glucose (0.1 M) at a specific activity of 4.0 IU/A.sub.280 or 116 turnover/minute at pH 5.5 and 20.degree. C. As assayed by the **C prinus cinereus** peroxidase/anisidine method described in Example 8, the recombinant carbohydrate oxidase had the same

specific activity as wild-type enzyme.

Detailed Description Text - DETX (240):
50 .mu.l 75 .mu.g/ml, rec. **C prinus cinereus** peroxidase (rCiP)

US-PAT-NO: 6114509

DOCUMENT-IDENTIFIER: US 6114509 A

TITLE: Polypeptide with reduced allergenicity

DATE-ISSUED: September 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Olsen; Arne Agerlin	Virum	N/A	N/A	DK
Hansen; Lars Bo	Herlev	N/A	N/A	DK
Beck; Thomas Christian	Birker.o slashed.d	N/A	N/A	DK

APPL-NO: 09/ 405311

DATE FILED: September 20, 1999

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 09/150,891, filed Sep. 10, 1998, now U.S. Pat. No. 5,981,718; which is a continuation of application Ser. No. 08/836,293 filed May 12, 1997 now U.S. Pat. No. 5,856,451, which is a continuation of PCT/DK95/00497, filed Dec. 7, 1995; and claims priority under 35 U.S.C. 119 of Danish applications having Ser. Nos. 1395/94, 1396/94, 1397/94, 1398/94, 1399/94, 1400/94, and 1401/94, all of which were filed on Dec. 7, 1994; the contents of which are hereby incorporated by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1395/94	December 7, 1994
DK	1396/94	December 7, 1994
DK	1397/94	December 7, 1994
DK	1398/94	December 7, 1994
DK	1399/94	December 7, 1994
DK	1400/94	December 7, 1994
DK	1401/94	December 7, 1994

US-CL-CURRENT: 530/402, 435/189 , 435/190 , 530/350 , 530/403

ABSTRACT:

The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the

parent polypeptide. Further the invention relates to compositions comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, composition for treating textiles, and compositions used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or compositions thereof for reducing the allergenicity of products for a vast number of industrial applications.

21 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

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Detailed Description Text - DETX (60):
Said Laccases may be derived from Polyporus pinsitus, Myceliophtora thermophila, **Coprinus cinereus,** Rhizoctonia solani, Rhizoctonia praticola, Scytalidium thermophilum and Rhus vernicifera.

Detailed Description Text - DETX (62):
The Peroxidase may be derived from e.g. Soy bean, Horseradish or **Coprinus cinereus**.

Detailed Description Text - DETX (203):
The most common oxidoreductase for personal care purposes is an **oxidase** (usually glucose **oxidase**) with substrate (e.g. glucose) that ensures production of H.sub.2 O.sub.2, which then will initiate the oxidation of for instance SCN.sup.- or I.sup.- into **antimicrobial** reagents (SCNO.sup.- or I.sub.2) by a **peroxidase** (usually lactoperoxidase). This enzymatic complex is known in nature from e.g. milk and saliva.

Detailed Description Text - DETX (316):
Coprinus cinereus peroxidase (available from Novo Nordisk A/S on request).

Detailed Description Text - DETX (432):
Conjuration of **Coprinus cinereus** Peroxidase with N-succinimidyl Carbonate Activated mPEG 15.000

US-PAT-NO: 6106828

DOCUMENT-IDENTIFIER: US 6106828 A

TITLE: Conjugation of polypeptides

DATE-ISSUED: August 22, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bisgard-Frantzen; Henrik	Bagsvaerd	N/A	N/A	DK
Olsen; Arne Agerlin	Virum	N/A	N/A	DK
Prento; Annette	Ballerup	N/A	N/A	DK

APPL-NO: 09/ 123787

DATE FILED: July 28, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a Continuation application of PCT/DK97/00051 filed on Feb. 7, 1997 and claims priority under 35 U.S.C. 119 of Danish application 0154/96 filed on Feb. 15, 1996, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	0154/96	February 15, 1996

US-CL-CURRENT: 424/94.1, 424/94.2 , 435/174 , 435/175 , 435/176 , 435/177 , 435/178 , 435/179 , 435/180 , 435/181 , 514/12 , 514/2 , 514/8 , 530/322 , 530/323

ABSTRACT:

The present invention provides polypeptide conjugates with reduced allergenicity comprising a polymeric carrier molecule having two or more polypeptide molecules coupled thereto. The invention also provides methods for producing the conjugates, compositions comprising the conjugates, and the use of the conjugates in industrial applications, including personal care products and detergent compositions.

40 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

---------- KWIC ---------

Detailed Description Text - DETX (18):
In Example 1 the surprising discovery of the present invention is disclosed showing that the allergenicity of purified wild-type **Coprinus** cinerea peroxidase coupled to dextran (M.sub.r about 1,000 kDa) intratrachaelly introduced into Dunkin Hartley guinea pigs is reduced in comparison to the corresponding monomer peroxidase (M.sub.r about 39 kDa).

Detailed Description Text - DETX (149):
The most common oxidoreductase for personal care purposes is an **oxidase** (usually glucose **oxidase**) with substrate (e.g. glucose) that ensures production of H.sub.2 O.sub.2, which then will initiate the oxidation of for instance SCN.sup.- or I.sup.- into **antimicrobial** reagents (SCNO.sup.- or I.sub.2) by a **peroxidase** (usually lactoperoxidase). This enzymatic complex is known in nature from e.g. milk and saliva.

Detailed Description Text - DETX (245):
Monomer purified peroxidase (M.sub.r =39 kDa) derived from wild-type **Coprinus cinereus** (available from Novo Nordisk A/S).

Detailed Description Text - DETX (285):
Dunkin Hartley guinea pigs were exposed to 1.0 .mu.g purified monomer **Coprinus** cinerea peroxidase (guinea pig 21-30) and 1.0 .mu.g modified dextran-peroxidase A (guinea pig 31-40) and dextranperoxidase B (guinea pig 41-50) by intratracheal dosage as described ED-9516670 available on request from Novo Nordisk A/S.

US-PAT-NO: 6100080

DOCUMENT-IDENTIFIER: US 6100080 A

TITLE: Method for enzymatic treatment of biofilm

DATE-ISSUED: August 8, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johansen; Charlotte	Holte	N/A	N/A	DK

APPL-NO: 08/ 990829

DATE FILED: December 15, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1446/96	December 18, 1996

US-CL-CURRENT: 435/264

ABSTRACT:

A method for cleaning and **disinfecting** a surface at least partly covered by a biofilm layer comprising the steps of contacting the biofilm with a cleaning composition comprising one or more hydrolases, e.g. a hydrolytic enzyme produced by a strain of the fungus Aspergillus aculeatus, in an amount effective for either fully or partly removing or releasing the biofilm layer from the surface; and contacting the biofilm with a bactericidal **disinfecting** composition comprising an oxidoreductase such as an **oxidase, a peroxidase** or a laccase, in an amount effective for **killing the living bacterial** cells present in the biofilm. In particular, a **disinfecting** composition comprising laccase at concentration between about 0.01 to about 1000 mg protein/ml composition and an oxidation enhancer such as methyl syringate.

19 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Abstract Text - ABTX (1):

A method for cleaning and **disinfecting** a surface at least partly covered by a biofilm layer comprising the steps of contacting the biofilm with a cleaning composition comprising one or more hydrolases, e.g. a hydrolytic enzyme produced by a strain of the fungus Aspergillus aculeatus, in an amount effective for either fully or partly removing or releasing the biofilm layer

from the surface; and contacting the biofilm with a bactericidal **disinfecting** composition comprising an oxidoreductase such as an **oxidase, a peroxidase** or a laccase, in an amount effective for **killing the living bacterial** cells present in the biofilm. In particular, a **disinfecting** composition comprising laccase at concentration between about 0.01 to about 1000 mg protein/ml composition and an oxidation enhancer such as methyl syringate.

Brief Summary Text - BSTX (37):

Another hydrolytic enzyme which may be useful in the method of the present invention is a microbial lipase. As such, the lipase may be selected from yeast, e.g. Candida, lipases, bacterial, e.g. Pseudomonas or Bacillus, lipases; or fungal, e.g. Humicola or Rhizomucor, lipases. More specifically, suitable lipases may be the Rhizomucor miehei lipase (e.g. prepared as described in EP 238 023), Thermomyces lanuginosa lipase e.g. prepared as described in EP 305 216 (available from Novo Nordisk under the trade name Lipolase.TM.), Humicola insolens lipase, Pseudomonas stutzeri lipase, Pseudomonas cepacia lipase, Candida antarctica lipase A or B, or lipases from rGPL, Absidia blakesleena, Absidia corymbifera, Fusarium solani, Fusarium oxysporum, Penicillum cyclopium, Penicillum crustosum, Penicillum expansum, Rhodotorula glutinis, Thiarosporella phaseolina, Rhizopus microsporus, Sporobolomyces shibatanus, Aureobasidium pullulans, Hansenula anomala, Geotricum penicillatum, Lactobacillus curvatus, Brochothrix thermosohata, **Coprinus** cinerius, Trichoderma harzanium, Trichoderma reesei, Rhizopus japonicus or Pseudomonas plantari. Other examples of suitable lipases may be variants of any one of the lipases mentioned above, e.g. as described in WO 92/05249 or WO 93/11254.

Brief Summary Text - BSTX (49):

Preferably, the oxidoreductase to be used according to the invenion is selected from the group consisting of oxidases, peroxidases and laccases, preferably from glucose oxidases, amino acid oxidases, xanthine oxidases, ascorbic acid oxidases, lacto-peroxidases, horseradish peroxidases, myeloperoxidases, laccases, **Coprinus** peroxidases, and haloperoxidases.

Brief Summary Text - BSTX (50):

Laccases are enzymes that catalyze the oxidation of a substrate with oxygen; they are known from microbial, plant and animal origins. More specifically, laccases (EC 1.10.3.2) are oxidoreductases that function with molecular oxygen as electron acceptor. Molecular oxygen from the atmosphere will usually be present in sufficient quantity, so normally it is not necessary to add extra oxygen to the process medium. Examples of a laccase enzyme useful in the compositions of the present invention is laccase obtainable from the strain **Coprinus cinereus,** IFO 30116, or from a laccase having immunochemical properties identical to those of a laccase derived from **Coprinus cinereus,** IFO 30116; or obtainable from a strain of Myceliophthora thermophila as disclosed in WO 91/05839.

Brief Summary Text - BSTX (51):

A useful peroxidase is preferably producible by plants (e.g. horseradish or soybean peroxidase) or microorganisms such as fungi or bacteria. Some

preferred fungi include strains belonging to the subdivision Deuteromycotina, class Hyphomycetes, e.g. Fusarium, Humicola, Tricoderma, Myrothecium, Verticillum, Arthromyces, Caldariomyces, Ulocladium, Embellisia, Cladosporium or Dreschlera, in particular Fusarium oxysporum (DSM 2672), Humicola insolens, Trichoderma resii, Myrothecium verrucaria (IFO 6113), Verticillum alboatrum, Verticillum dahlie, Arthromyces ramosus (FERM P-7754), Caldariomyces fumago, Ulocladium chartarum, Embellisia alli or Dreschlera halodes. Other preferred fungi include strains belonging to the subdivision Basidiomycotina, class Basidiomycetes, e.g. **Coprinus,** Phanerochaete, Coriolus or Trametes, in particular **Coprinus cinereus** f. microsporus (IFO 8371), **Coprinus** macrorhizus, Phanerochaete chrysosporium (e.g. NA-12) or Trametes (previously called Polyporus), e.g. T. versicolor (e.g. PR4 28-A). Further preferred fungi include strains belonging to the

Brief Summary Text - BSTX (56):

Particularly, a recombinantly produced peroxidase is a peroxidase derived from a **Coprinus** sp., in particular C. macrorhizus or C. **cinereus** according to WO 92/16634, or a variant thereof, e.g., a variant as described in WO 94/12621. However, the peroxidase may also by produced by conventional fermentation of a strain belonging to the genus **Coprinus,** preferably the species **Coprinus cinereus or Coprinus** mactorhizus, more preferably **Coprinus cinereus,** IFO 8371 or IFO 30114.

Brief Summary Text - BSTX (79):

Preferably, the amount of oxidoreductase in the **disinfecting** composition of the present invention is from about 0.01 to about 1000 .mu.g protein/ml of composition, more preferably from about 10 to about 100 .mu.g protein/ml of composition. In case of **oxidases and peroxidases,** the preferred amount is from about 0.01 to about 100 **oxidase or peroxidase** units (e.g. GODU or PODU) per ml of composition, more preferably from about 0.1 to about 50 units/ml.

US-PAT-NO: 6025186

DOCUMENT-IDENTIFIER: US 6025186 A

TITLE: Reduction of malodor

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kirk; Ole	Virum	N/A	N/A	DK
Johansen; Charlotte	Holte	N/A	N/A	DK
Hansen; Tomas Tage	Aller.o slashed.d	N/A	N/A	DK

APPL-NO: 09/ 133777

DATE FILED: August 12, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish application serial no. 0937/97 filed Aug. 14, 1997, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	0937/97	August 14, 1997

US-CL-CURRENT: 435/262, 424/94.4 , 435/192 , 604/360

ABSTRACT:

The present invention relates to the use of a haloperoxidase in combination with a hydrogen peroxide source for reducing the malodor emanating from soiled hygiene products. The invention also relates to hygiene products with reduced malodor in soiled state.

15 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

---------- KWIC ---------

Drawing Description Text - DRTX (38):

Recombinant peroxidase derived form **C prinus cinereus** (rCIP) (available from Novo Nordisk).

Detailed Description Text - DETX (3):

Antibacterial Activity of **Peroxidase** Against Escherichia coli, Enterococcus faecalis and Proteus mirabilis Attached to Pulp Material

Detailed Description Text - DETX (15):

The **antibacterial** activity of the haloperoxidase system with chloride from artificial urine A as electron donor (Example 1) and hydrogen peroxide as electron acceptor, was compared with the **antibacterial** activity of a **peroxidase** system using either thiocyanate (20 mM) or iodide (1 mM) as electron donor and hydrogen peroxide (0.5 mM) as electron acceptor.

Detailed Description Text - DETX (16):

Coprinus peroxidase has antibacterial activity by oxidation of either iodide or thiocyanate. The **antibacterial** activity was measured by Malthus as described in Example 1, the activity was determined against both planktonic cells suspended in artificial urine and cells on CTMP material. **Coprinus peroxidase** (Novo Nordisk A/S) (rCIP), with an **antibacterial** activity comparable to the well-known lactoperoxidase system, was used in concentrations from 0 to 4 POXU/ml.

US-PAT-NO: 5981718

DOCUMENT-IDENTIFIER: US 5981718 A

TITLE: Polypeptide with reduced allergenicity

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Olsen; Arne Agerlin	Virum	N/A	N/A	DK
Hansen; Lars Bo	Herlev	N/A	N/A	DK
Beck; Thomas Christian	Birker.o slashed.d	N/A	N/A	DK

APPL-NO: 09/ 150891

DATE FILED: September 10, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application Ser. No. 08/836,293 filed on May 12, 1997, now U.S. Pat. No. 5,856,451 which is a continuation of application Ser. No. PCT/DK95/00497 filed on Dec. 7, 1995, and claims priority under 35 U.S.C. 119 of Danish application serial serial nos. 1395/94 filed on Dec. 7, 1994; 1396/94 filed on Dec. 7, 1994; 1397/94 filed on Dec. 7, 1994; 1398/94 filed on Dec. 7, 1994; 1399 filed on Dec. 7, 1994; 1400/94 filed on Dec. 7, 1994; and 1401/94 filed on Dec. 7, 1994, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1395/94	December 7, 1994
DK	1396/94	December 7, 1994
DK	1397/94	December 7, 1994
DK	1398/94	December 7, 1994
DK	1399/94	December 7, 1994
DK	1400/94	December 7, 1994
DK	1401/94	December 7, 1994

US-CL-CURRENT: 530/402, 435/189 , 435/193 , 530/350 , 530/403

ABSTRACT:

The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the

parent polypeptide. Further the invention relates to compositions comprising said polypeptides and fruther ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, composition for treating textiles, and compositions used for manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or compositions thereof for reducing the allergenicity of products for a vast number of industrial applications.

12 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

---------- KWIC ---------

Detailed Description Text - DETX (60):
Said Laccases may be derived from Polyporus pinsitus, Myceliophtora thermophila, **Coprinus cinereus**, Rhizoctonia solani, Rhizoctonia praticola, Scytalidium thermophilum and Rhus vernicifera.

Detailed Description Text - DETX (62):
The Peroxidase may be derived from e.g. Soy bean, Horseradish or **Coprinus cinereus**.

Detailed Description Text - DETX (372):
The most common oxidoreductase for personal care purposes is an **oxidase** (usually glucose **oxidase**) with substrate (e.g. glucose) that ensures production of H.sub.2 O.sub.2, which then will initiate the oxidation of for instance SCN.sup.- or I.sup.- into **antimicrobial** reagents (SCNO.sup.- or I.sub.2) by a **peroxidase** (usually lactoperoxidase). This enzymatic complex is known in nature from e.g. milk and saliva.

Detailed Description Text - DETX (484):
Coprinus cinereus peroxidase (available from Novo Nordisk A/S on request).

Detailed Description Text - DETX (607):
Conjucation of **Coprinus cinereus** peroxidase with N-succinimidyl carbonate activated mPEG 15.000

US-PAT-NO: 5879921

DOCUMENT-IDENTIFIER: US 5879921 A
See image for Certificate of Correction

TITLE: Recombinant expression of a glucose oxidase from a cladosporium strain

DATE-ISSUED: March 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cherry; Joel R.	Davis	CA	N/A	N/A
Berka; Randy M.	Davis	CA	N/A	N/A
Halkier; Torben	Birkeroed	N/A	N/A	DK

APPL-NO: 08/ 746257

DATE FILED: November 7, 1996

US-CL-CURRENT: 435/190, 435/252.3 , 435/254.11 , 435/254.7 , 435/320.1 , 435/6 , 536/23.2 , 536/24.3

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

25 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (22):

The invention further relates to methods of and compositions for using the glucose **oxidase** obtained according to the method of the present invention. In the baking industry, the glucose **oxidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent The glucose **xidase** of the present invention may also be a component of a laundry detergent composition or a dishwashing detergent composition and may be

used as a hydrogen peroxide source. The laundry detergent composition may comprise a surfactant, said glucose **_xidase,** and a substrate for the glucose **_xidase**. The dishwashing detergent composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **_xidas_** may particularly be useful for removing stains.

Detailed Description Text - DETX (81):

The enzyme also has many potential applications in the personal care area, for example in personal care products such as tooth paste, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations, and solutions for cleaning contact lenses. In particular, the glucose **oxidase** of the invention may be very useful in tooth paste, alone or together with other enzymes, preferably together with an amyloglucosidase and a lactoperoxidase as such a combination of enzymes forms a very efficient **antibacterial** system:

Detailed Description Text - DETX (200):

Seven day culture broth is diluted 1:300, 1:600 and 1:1200 in 100 mM sodium acetate pH 5.6 buffer and 20 .mu.l of each dilution is transferred to a microtiter dish. To begin the reaction 200 .mu.l of GOX substrate buffer (100 mM sodium acetate pH 5.6, 100 mM D-glucose, 0.4 mM ABTS and 0.3 POXU/ml of **Coprinus cinereus** peroxidase is added. After 20 minutes at 20.degree. C., color development is measured using a micro plate reader at 405 nm. GOX activity is determined by comparison to standards of Aspergillus niger glucose oxidase (Sigma Chemical Co., St. Louis, Mo.). To confirm that observed activities are glucose dependent, diluted broths are also assayed with GOX substrate buffer lacking D-glucose.

US-PAT-NO: 5856451

DOCUMENT-IDENTIFIER: US 5856451 A

TITLE: Method for reducing respiratory allergenicity

DATE-ISSUED: January 5, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Olsen; Arne Agerlin	Virum	N/A	N/A	DK
Hansen; Lars Bo	Herlev	N/A	N/A	DK
Beck; Thomas Christian	Birker.o slashed.d	N/A	N/A	DK

APPL-NO: 08/ 836293

DATE FILED: May 12, 1997

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	1395/94	December 7, 1994
DK	1396/94	December 7, 1994
DK	1397/94	December 7, 1994
DK	1398/94	December 7, 1994
DK	1399/94	December 7, 1994
DK	1400/94	December 7, 1994
DK	1401/94	December 7, 1994

PCT-DATA:
APPL-NO: PCT/DK95/00497
DATE-FILED: December 7, 1995
PUB-NO: WO96/17929
PUB-DATE: Jun 13, 1996
371-DATE: May 12, 1997
102(E)-DATE:May 12, 1997

US-CL-CURRENT: 530/402, 435/189 , 435/193 , 530/350 , 530/403

ABSTRACT:

The invention relates to modified polypeptides with reduced allergenicity comprising a parent polypeptide with a molecular weight from between 10 kDa and 100 kDa conjugated to a polymer with a molecular weight (M.sub.r) in the range of 1 kDa and 60 kDa. The modified polypeptide are produced using a process including the step of conjugating from 1 to 30 polymer molecules with the parent polypeptide. Further the invention relates to compositions comprising said polypeptides and further ingredients normally used in e.g. detergents, including dishwashing detergents and soap bars, household article, agrochemicals, personal care products, cosmetics, toiletries, oral and dermal pharmaceuticals, composition for treating textiles, and compositions used for

manufacturing food and feed. Finally the invention is directed to uses of polypeptides with reduced allergenicity or compositions thereof for reducing the allergenicity of productsfor a vast number of industrial applications.

37 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

---------- KWIC ---------

Detailed Description Text - DETX (59):
Said Laccases may be derived from Polyporus pinsitus, Myceliophtora thermophila, **Coprinus cinereus,** Rhizoctonia solani, Rhizoctonia praticola, Scytalidium thermophilum and Rhus vernicifera.

Detailed Description Text - DETX (61):
The Peroxidase may be derived from e.g. Soy bean, Horseradish or **Coprinus cinereus**.

Detailed Description Text - DETX (380):
The most common oxidoreductase for personal care purposes is an **oxidase** (usually glucose **oxidase**) with substrate (e.g. glucose) that ensures production of H.sub.2 O.sub.2, which then will initiate the oxidation of for instance SCN.sup.- or I.sup.- into **antimicrobial** reagents (SCNO.sup.- or I.sub.2) by a **peroxidase** (usually lactoperoxidase). This enzymatic complex is known in nature from e.g. milk and saliva.

Detailed Description Text - DETX (494):
Coprinus cinereus peroxidase (available from Novo Nordisk A/S on request).

Detailed Description Text - DETX (615):
Conjugation of **Coprinus cinereus** peroxidase with N-succinimidyl carbonate activated mPEG 15.000

US-PAT-NO: 5834280

DOCUMENT-IDENTIFIER: US 5834280 A

TITLE: Glucose oxidases obtained from a cladosporium

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oxenb.o slashed.ll; Karen M.	Charlottenlund	N/A	N/A	DK
Si; Joan Qi	Laufen	N/A	N/A	CH
Aagaard; Jesper	Lyngby	N/A	N/A	DK

DISCLAIMER DATE: 20150525

APPL-NO: 08/ 746283

DATE FILED: November 7, 1996

PARENT-CASE:

This application is a continuation-in-part of application Ser. No. 08/446,645, filed May 25, 1995, which is a continuation-in-part of PCT/DK95/00178 May 3, 1995, the contents of which are incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	504/94	May 3, 1994

US-CL-CURRENT: 435/190, 435/911

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences obtained from a strain of Cladosporium, particulary Cladosporium oxysporum, strain CBS 163.94. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

13 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (19):

The invention further relates to methods of and compositions for using the glucose **xidase** obtained according to the method of the present invention. In the baking industry, the glucose **oxidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The glucose **oxidase** of the present invention may also be a component of a laundry detergent composition or a dishwashing detergent composition and may be used as a hydrogen peroxide source. The laundry detergent composition may comprise a surfactant, said glucose **oxidase,** and a substrate for the glucose **oxidase**. The dishwashing detergent composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **oxidase** may particularly be useful for removing stains.

Detailed Description Text - DETX (82):

The enzyme also has many potential applications in the personal care area, for example in personal care products such as tooth paste, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations, and solutions for cleaning contact lenses. In particular, the glucose **oxidase** of the invention may be very useful in tooth paste, alone or together with other enzymes, preferably together with an amyloglucosidase and a lactoperoxidase as such a combination of enzymes forms a very efficient **antibacterial** system:

Detailed Description Text - DETX (203):

Seven day culture broth is diluted 1:300, 1:600 and 1:1200 in 100 mM sodium acetate pH 5.6 buffer and 20 .mu.l of each dilution is transferred to a microtiter dish. To begin the reaction 200 .mu.g of GOX substrate buffer (100 mM sodium acetate pH 5.6, 100 mM D-glucose, 0.4 mM ABTS and 0.3 POXU/ml of **Coprinus cinereus** peroxidase is added. After 20 minutes at 20.degree. C., color development is measured using a micro plate reader at 405 nm. GOX activity is determined by comparison to standards of Aspergillus niger glucose oxidase (Sigma Chemical Co., St. Louis, Mo.). To confirm that observed activities are glucose depende nt, diluted broths are also assayed with GOX substrate buffer lacking D-glucose.

US-PAT-NO: 5766896

DOCUMENT-IDENTIFIER: US 5766896 A

TITLE: Method of producing iodine by use of a copper containing oxidase enzyme

DATE-ISSUED: June 16, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Xu; Feng	Woodland	CA	N/A	N/A

APPL-NO: 08/ 343308

DATE FILED: November 22, 1994

US-CL-CURRENT: 435/168, 435/189

ABSTRACT:

The present invention relates to a method for oxidation of iodide which comprises contacting, in an aqueous solution, a copper-containing oxidaze enzyme and a source of ionic iodide(I.sup.-), for a time and under conditions sufficient to permit the conversion of ionic iodide to iodine by the enzyme. The copper-containing enzymes may be, for example, a laccase or a bilirubin oxidaze.

11 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

---------- KWIC ---------

Brief Summary Text - BSTX (4):

Iodine(I.sub.2) has for many years been widely used as a **disinfectant,** for many types of situations. Skin cleansers, wound **disinfection,** contact lens cleaning and water sanitation are just a few of the uses to which iodine has been applied. In addition, iodine is also useful in catalysts, as an animal feed additive, in pharmaceuticals, and as polymer precursor additives. Although the I.sub.2 -based system of **disinfection** is extremely effective, several factors limit the scope of directly applying I.sub.2. In particular, the production, storage, transportation and handling of I.sub.2 are extremely hazardous, due to the chemicals involved in production and also due to the toxicity of I.sub.2 itself even in moderate concentrations. Generally, I.sub.2 is obtained from natural sources, such as brine, by processes that utilize

strong inorganic acids, chlorine gas, and other hazardous chemicals. Iodophores have been developed as I.sub.2 carriers to replace simple I.sub.2 solutions for industrial and domestic **disinfection**. In addition, binary systems capable of generating I.sub.2 from an I.sup.- salt and a chemical oxidant are also available. Both these systems create the need for disposal of large, potentially toxic amounts of by-products. Another alternative to both industrially producing I.sub.2 on a large scale, and to applying I.sub.2 as a **disinfectant,** has been found in the **peroxidase-based** generation of I.sub.2 (U.S. Pat. Nos. 4,282,324; 4,617,190;4,588,586; 4,937,072; 5,055,287;5,227,161; 5,169,455;4,996,146; 4,576,817). Such methods involve the use of the enzyme **peroxidase,** the oxidizing agent H.sub.2 O.sub.2, and a source of ionic iodide. Unfortunately, this method has the disadvantage of requiring the hazardous and volatile peroxide or peracid, which has to be either transported or generated in Situ by additional enzymatic or chemical steps, thus making the system more complex and/or costly.

Detailed Description Text - DETX (3):

The observation that I.sup.- can act as a laccase substrate has led to the development of a method by which I.sup.- is oxidized to elemental iodine by use of a laccase, or other Cu-containing **oxidase** enzymes. In an aqueous solution, in which a source of ionic iodide is provided, laccase slowly converts the I.sup.- to I.sub.2. The conversion requires no dangerous or volatile chemicals such as chlorine. The source of ionic iodide may be any of the currently known sources, such as alkali metal salts in binary iodine **disinfectants,** raw or initially iodine harvested brine solutions, bittern, ionic iodide solutions in which iodate from caliche is reduced to iodide, or seaweed. In the case in which chloride is inhibitory to the enzyme used, residual chloride in the starting material should first be reduced to below the inhibition constant. In the case of the Myceliophthora laccase, the inhibition constant is approximately 70 mM.

Detailed Description Text - DETX (5):

Copper-containing oxidases are obtainable from a wide variety of plant, fungal, bacterial and animal sources, and many are commercially available. In addition to those enzymes listed above, this also includes polyphenol oxidase, ferroxidase II, phenoxazinone synthase, glycerol oxidase, and cytochrome oxidase. The preferred oxidase, laccase, is available from a number of species, particularly fungal species, for example, Aspergillus, Neurospora, Podospora, Botrytis, Collybia, Fomes, Lentinus, Pleurotus, Trametes, Rhizoctonia (U.S. Ser. No. 08/172,331, incorporated herein by reference), **Coprinus,** Psatyrella, Myceliophthora (U.S. Ser. No. 08/253,781, incorporated herein by reference), Scytalidium (U.S. Ser. No. 08/253,784, incorporated herein by reference), Polyporus (U.S. Ser. No. 08/265,534, incorporated herein by reference), Phlebia (WO 92/01046), and Coriolus (JP 2-238885). Additionally, bilirubin oxidase is readily available from Myrothecium verrucaria and Trachyderma tsunodae.

Claims Text - CLTX (4):

2. The method of claim 1 in which the laccase is selected from the group consisting of a Myceliophthora laccase, a Scytalidium laccase, a Polyporus

laccase, and a Rhizoctonia laccase, an Aspergillus laccase, a Neurospora laccase, a Podospora laccase, a Botrytis laccase a Collybia laccase, a Fomes laccase, a Lentinus laccase, a Pleurotus laccase, a Trametes laccase, a **C. prinus** laccase, a Psatryella laccase, a Phlebia laccase, and a Coriolus laccase.

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	594	(sanitiz$ or disinfect$ or antimicrob$ or antibacter$ or antfung$ or (kill$ or inhibit$)near3(bacter$ or microb$)) same (peroxidase$ or oxidase$)	USPAT; US-PGPUB	2003/05/21 14:20
2	L2	384	coprinus or cinereus	USPAT; US-PGPUB	2003/05/21 14:21
3	L3	26	1 and 2	USPAT; US-PGPUB	2003/05/21 14:21
4	L4	8	1 same laundry	USPAT; US-PGPUB	2003/05/21 14:41

PGPUB-DOCUMENT-NUMBER: 20020155971

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020155971 A1

TITLE: Enzyme tablets for cleaning improvement

PUBLICATION-DATE: October 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Laustsen, Mads Aage	Lyngby		DK	
Johansen, Charlotte	Holte		DK	

APPL-NO: 09/ 821343

DATE FILED: March 29, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60195519 20000406 US

non-provisional-of-provisional 60218181 20000714 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	2000 00548	2000DK-2000 00548	April 3, 2000
DK	2000 01063	2000DK-2000 01063	July 7, 2000

US-CL-CURRENT: 510/392, 510/444 , 510/446 , 510/447

ABSTRACT:

The present invention concerns an enzyme containing cleaning particle having a size of more than 10.5 mm in its longest dimension, wherein the non-enzyme components of the particle have a detergency of less than 4.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (134):

[0128] The particles of the invention may suitably be used for increasing the cleaning performance of a washing solution. Accordingly particles of the invention may suitably be added to wash water alone or in combination with a conventional detergent to obtain an increased cleaning performance, preferably directed towards soiling on textile which is a substrate for the enzyme(s) in the particle. A particularly useful application is found for particles of the invention comprising and oxidoreductases and enhancers. Particles comprising oxidoreductases, preferably laccases, and **peroxidases** such as haloperoxidases

optionally formulated in the particle of the invention together with at least one enhancer, improving the effect of the oxidoreductase, will provide excellent microbial control and **antimicrobial** system in applications in which the particle is used. Such a particle could for example be advantageously used for **killing or inhibiting micr bial** cells in a washing liquor and/or on the fabrics to be cleaned in a washing process. Accordingly the **antimicrobial** particle of the invention may be added to a washing processes separately and in individual doses, especially when the **laundry** is particularly soiled from microbially contaminated soilings or soiling facilitating microbial growth, such as faeces or other human or animal secretions, various foodstuffs and/or organic compositions. This concept may of course also be applied on other objects for which sanitation is desired. Accordingly the invention provides use of a particle of the invention comprising an oxidoreductase and preferably also at least one mediator or enhancer for **antimicrobial** treatment of an object, preferably a cellulose containing fabric. Also using a combination of different enhancer may provide even more improved sanitation effect as different enhancers may have different effect on different types of microbial cells.

PGPUB-DOCUMENT-NUMBER: 20020119207

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119207 A1

TITLE: Non-toxic antimicrobial compositions and methods of use

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, James R. JR.	Ann Arbor	MI	US	
Hamouda, Tarek	Milan	MI	US	
Shih, Amy	Ann Arbor	MI	US	
Myc, Andrzej	Ann Arbor	MI	US	

APPL-NO: 09/ 965447

DATE FILED: September 27, 2001

RELATED-US-APPL-DATA:

child 09965447 A1 20010927

parent continuation-in-part-of 09891086 20010625 US PENDING

child 09891086 20010625 US

parent continuation-in-part-of 09751059 20001229 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09561111 20000428 US PENDING

child 09561111 20000428 US

parent continuation-in-part-of 09474866 19991230 US ABANDONED

non-provisional-of-provisional 60131638 19990428 US

US-CL-CURRENT: 424/750, 424/727 , 424/755 , 424/757 , 424/769 , 424/776 , 514/643

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention

relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

[0001] The following application is a Continuation-in-Part of U.S. application Ser. No. 09/891,086, filed Jun. 25, 2001, which is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of 09/561,111, filed Apr. 28, 2000, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties. This invention was made in part during work partially supported by the U.S. government under DARPA grant No. MDA972-97-1-0007. The government has certain rights in the invention.

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Detail Description Paragraph - DETX (187):

[0251] Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); burn wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2%+5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% clotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium

chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10% sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3% avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate O, 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase**, 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP-95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquatemium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher detergent (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); **laundry** cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

PGPUB-DOCUMENT-NUMBER: 20020119136

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119136 A1

TITLE: Antimicrobial peroxidase compositions

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Johansen, Charlotte	Holte		DK	

APPL-NO: 09/ 815848

DATE FILED: March 23, 2001

RELATED-US-APPL-DATA:

child 09815848 A1 20010323

parent division-of 09174956 19981019 US ABANDONED

child 09174956 19981019 US

parent continuation-of PCT/DK97/00205 19970506 US UNKNOWN

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	0559/96	1996DK-0559/96	May 9, 1996
DK	0785/96	1996DK-0785/96	July 15, 1996

US-CL-CURRENT: 424/94.4, 424/195.15 , 424/616

ABSTRACT:

Enzymatic compositions comprising a Coprinus **peroxidase,** hydrogen, peroxide or a source of hydrogen peroxide, and an enhancing agent such as an electron donor, e.g., phenothiazine-10-propionic acid; 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulfonate); acetosyringate; C.sub.1-8-alkylsyringate; or a water-soluble halide or thiocynate salt such as potassium iodide, have **antimicrobial** properties useful e.g., for inhibiting or killing microorganizms present in **laundry,** on human or animal skin, hair, mucous membranes, oral cavities, teeth, wounds, bruises, and on hard surfaces, and can be used as **disinfectant,** a preservative for cosmetics, and for cleaning, **disinfecting or inhibiting microbial** growth on process equipment used for e.g. water treatment, food processing, chemical or pharmaceutical processing, paper pulp processing, and water sanitation.

---------- KWIC ---------

Abstract Paragraph - ABTX (1):

Enzymatic compositions comprising a Coprinus **peroxidase,** hydrogen, peroxide or a source of hydrogen peroxide, and an enhancing agent such as an electron donor, e.g., phenothiazine-10-propionic acid; 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulfonate); acetosyringate; C.sub.1-8-alkylsyringate; or a water-soluble halide or thiocynate salt such as potassium iodide, have **antimicrobial** properties useful e.g., for inhibiting or killing microorganizms present in **laundry,** on human or animal skin, hair, mucous membranes, oral cavities, teeth, wounds, bruises, and on hard surfaces, and can be used as **disinfectant,** a preservative for cosmetics, and for cleaning, **disinfecting or inhibiting microbial** growth on process equipment used for e.g. water treatment, food processing, chemical or pharmaceutical processing, paper pulp processing, and water sanitation.

Summary of Invention Paragraph - BSTX (1):

[0001] The present invention relates to an enzymatic composition capable of **killing or inhibiting microbial** cells or microorganisms, more specifically microbial cells or microorganisms present in **laundry,** on hard surface, on skin, teeth or mucous membranes; and for preserving food products, cosmetics, paints, coatings, etc., the composition comprising a **peroxidase** enzyme and an enhancing agent acting as electron donor.

Summary of Invention Paragraph - BSTX (8):

[0006] Surprisingly, it has been found that the combined action of a **peroxidase** enzyme from the fungus Coprinus and an enhancing agent acting as electron-donor, when applied to e.g. a hard surface, skin, mucous membranes, oral cavity, hair, or **laundry** in the presence of hydrogen peroxide, results in a hitherto unknown synergistic **antimicrobial** effect.

PGPUB-DOCUMENT-NUMBER: 20020045667

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020045667 A1

TITLE: Non-toxic antimicrobial compositions and methods of use

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, James R. JR.	Ann Arbor	MI	US	
Hamouda, Tarek	Ypsilanti	MI	US	
Shih, Amy	Ann Arbor	MI	US	
Myc, Andrzej	Ann Arbor	MI	US	

APPL-NO: 09/ 891086

DATE FILED: June 25, 2001

RELATED-US-APPL-DATA:

child 09891086 A1 20010625

parent continuation-in-part-of 09751059 20001229 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09561111 20000428 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09474866 19991230 US ABANDONED

non-provisional-of-provisional 60131638 19990428 US

US-CL-CURRENT: 514/642, 514/724

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

[0001] The following application is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of

09/561,111, filed Apr. 28, 2000, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties.

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Detail Description Paragraph - DETX (186):

[0252] Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); bum wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2% +5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% clotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10%

sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3% avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase,** 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP-95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquaternium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher detergent (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); **laundry** cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

US-PAT-NO: 6559189

DOCUMENT-IDENTIFIER: US 6559189 B2

TITLE: Non-toxic antimicrobial compositions and methods of use

DATE-ISSUED: May 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baker, Jr.; James R.	Ann Arbor	MI	N/A	N/A
Hamouda; Tarek	Ypsilanti	MI	N/A	N/A
Shih; Amy	Ann Arbor	MI	N/A	N/A
Myc; Andrzej	Ann Arbor	MI	N/A	N/A

APPL-NO: 09/ 891086

DATE FILED: June 25, 2001

PARENT-CASE:

The following application is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of 09/561,111, filed Apr. 28, 2000, now U.S. Pat. No. 6,506,803, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, now abandoned, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties.

US-CL-CURRENT: 514/642, 514/537

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

19 Claims, 46 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 43

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Detailed Description Text - DETX (186):

Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); burn wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2% +5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% clotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10% sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3%

avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase,** 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP -95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquaternium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher detergent (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); **laundry** cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

US-PAT-NO: 6165761

DOCUMENT-IDENTIFIER: US 6165761 A

TITLE: Carbohydrate oxidase and use thereof in baking

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schneider; Palle	Ballerup	N/A	N/A	DK
Christensen; S.o slashed.ren	Copenhagen	N/A	N/A	DK
Dybdal; Lone	K.o slashed.benhavn	N/A	N/A	DK
Fuglsang; Claus Crone	Niv.ang.	N/A	N/A	DK
Xu; Feng	Woodland	CA	N/A	N/A
Golightly; Elizabeth	Davis	CA	N/A	N/A

APPL-NO: 09/ 217490

DATE FILED: December 21, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish applications PA 1997 01505 filed Dec. 22, 1997 and PA 1998 00763 filed Jun. 4, 1998, and of U.S. provisional application No. 60/068,717 filed Dec. 23, 1997 and provisional application No. 60/088,725 filed Jun. 10, 1998, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	01505/97	December 22, 1997
DK	1998 00763	June 4, 1998

US-CL-CURRENT: 435/190, 435/195 , 435/197 , 435/198 , 435/200 , 435/201 , 435/202 , 435/203 , 435/204 , 435/209

ABSTRACT:

The properties of dough or bread can be improved by the addition of a carbohydrate oxidase which can oxidize the reducing end of an oligosaccharide more efficiently than the corresponding monosaccharide, e.g., preferentially oxidizing maltodextrins or cellodextrins over glucose. A novel carbohydrate oxidase having the capability to oxidize maltodextrins and cellodextrins more efficiently than glucose may be obtained from a strain of Microdochium, particularly M. nivale. The amino acid sequence of the novel carbohydrate oxidase has very low homology (<20% identity) with known amino acid sequences.

13 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

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Detailed Description Text - DETX (140):

In addition to the us in baking, discussed above, the carbohydrate **oxidase** may be used, for example, in personal care products such as toothpaste, in particular, where whitening of the teeth is desirable, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations, and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The carbohydrate **oxidase** may also be a component of a **laundry** detergent composition or a dishwashing detergent composition and may be used for the generation of hydrogen peroxide. The **laundry** detergent composition may comprise a surfactant, said carbohydrate **oxidase** and a substrate for the carbohydrate **oxidase**. The dishwashing detergent composition may comprise said carbohydrate **oxidase** and a bleach precursor or peroxy acid, and a substrate for carbohydrate **oxidase**.

US-PAT-NO: 5879921

DOCUMENT-IDENTIFIER: US 5879921 A
See image for Certificate of Correction

TITLE: Recombinant expression of a glucose oxidase from a cladosporium strain

DATE-ISSUED: March 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cherry; Joel R.	Davis	CA	N/A	N/A
Berka; Randy M.	Davis	CA	N/A	N/A
Halkier; Torben	Birkeroed	N/A	N/A	DK

APPL-NO: 08/ 746257

DATE FILED: November 7, 1996

US-CL-CURRENT: 435/190, 435/252.3 , 435/254.11 , 435/254.7 , 435/320.1 , 435/6 , 536/23.2 , 536/24.3

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

25 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (22):

The invention further relates to methods of and compositions for using the glucose **oxidase** obtained according to the method of the present invention. In the baking industry, the glucose **oxidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent The glucose **xidase** of the present invention may also be a component of a **laundry** detergent composition or a dishwashing detergent composition and may be

used as a hydrogen peroxide source. The **laundry** detergent composition may comprise a surfactant, said glucose **xidase,** and a substrate for the glucose **oxidase**. The dishwashing detergent composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **oxidase** may particularly be useful for removing stains.

US-PAT-NO: 5834280

DOCUMENT-IDENTIFIER: US 5834280 A

TITLE: Glucose oxidases obtained from a cladosporium

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oxenb.o slashed.ll; Karen M.	Charlottenlund	N/A	N/A	DK
Si; Joan Qi	Laufen	N/A	N/A	CH
Aagaard; Jesper	Lyngby	N/A	N/A	DK

DISCLAIMER DATE: 20150525

APPL-NO: 08/ 746283

DATE FILED: November 7, 1996

PARENT-CASE:

This application is a continuation-in-part of application Ser. No. 08/446,645, filed May 25, 1995, which is a continuation-in-part of PCT/DK95/00178 May 3, 1995, the contents of which are incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	504/94	May 3, 1994

US-CL-CURRENT: 435/190, 435/911

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences obtained from a strain of Cladosporium, particulary Cladosporium oxysporum, strain CBS 163.94. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

13 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (19):

The invention further relates to methods of and compositions for using the glucose **oxidase** obtained according to the method of the present invention. In the baking industry, the glucose **oxidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The glucose **oxidase** of the present invention may also be a component of a **laundry** detergent composition or a dishwashing detergent composition and may be used as a hydrogen peroxide source. The **laundry** detergent composition may comprise a surfactant, said glucose **oxidase,** and a substrate for the glucose **oxidase**. The dishwashing detergent composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **oxidase** may particularly be useful for removing stains.

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	594	(sanitiz$ or disinfect$ or antimicrob$ or antibacter$ or antfung$ or (kill$ or inhibit$)near3(bacter$ or microb$)) same (peroxidase$ or oxidase$)	USPAT; US-PGPUB	2003/05/21 14:20
2	L2	384	coprinus or cinereus	USPAT; US-PGPUB	2003/05/21 14:21
3	L3	26	1 and 2	USPAT; US-PGPUB	2003/05/21 14:21
4	L4	8	1 same laundry	USPAT; US-PGPUB	2003/05/21 14:45
5	L5	22	1 same detergent$	USPAT; US-PGPUB	2003/05/21 14:45

PGPUB-DOCUMENT-NUMBER: 20020173437

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020173437 A1

TITLE: Methods and compositions for cleaning, rinsing, and antimicrobial treatment of medical equipment

PUBLICATION-DATE: November 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rabon, Reid	South St. Paul	MN	US	
Swart, Sally K.	Inver Grove Heights	MN	US	
Chandler, Denise	St. Paul	MN	US	
Everson, Terrence P.	Eagan	MN	US	

APPL-NO: 09/ 816695

DATE FILED: March 23, 2001

US-CL-CURRENT: 510/161, 134/19 , 134/2 , 134/22.1 , 134/22.13 , 134/22.14 , 134/22.19 , 134/26 , 134/29 , 134/30 , 134/34 , 134/36 , 134/6 , 510/421

ABSTRACT:

The present invention relates to methods for cleaning, rinsing, and/or antimicrobial treatment of medical carts, medical cages, and other medical instruments, devices or equipment. The method for cleaning employs a solid alkaline, for example a solid carbonate, cleaning composition for cleaning the medical cart, cage, instrument, device, or equipment. The method for rinsing employs a solid neutral or neutralizing rinse composition for rinsing the medical cart, cage, instrument, device, or equipment. The method for antimicrobial treatment employs a solid, for example a solid quaternary ammonium or solid halogen, antimicrobial composition, for antimicrobial treatment of the medical cart, cage, instrument, device, or equipment.

---------- KWIC ---------

Detail Description Paragraph - DETX (105):

[0112] The cleaning composition of the present invention can include one or more enzymes, which can provide desirable activity for removal of protein-based, carbohydrate-based, or triglyceride-based stains from substrates; for cleaning, destaining, and **sanitizing,** such as for medical and dental carts, cages, or instruments. Suitable enzymes include a protease, an amylase, a lipase, a gluconase, a cellulase, a **peroxidase,** or a mixture thereof of any suitable origin, such as vegetable, animal, bacterial, fungal or yeast

origin. Preferred selections are influenced by factors such as pH-activity and/or stability optima, the most ability, and stability to active **detergents,** builders and the like. In this respect bacterial or fungal enzymes are preferred, such as bacterial amylases and proteases, and fungal cellulases. Preferably the enzyme is a protease, a lipase, an amylase, or a combination thereof. A suitable cleaning effect can be achieved with amounts of enzyme as low as about 0.1 wt-% of the solid carbonate cleaning composition. In the cleaning compositions of the present invention, suitable cleaning can typically be achieved when an enzyme is present at about 1 to about 30 wt-%; preferably about 2 to about 15 wt-%; preferably about 3 to about 10 wt-%; preferably about 4 to about 8 wt-%; preferably about 4, about 5, about 6, about 7, or about 8 wt-%. The higher enzyme levels are typically desirable in highly concentrated cleaning formulations.

PGPUB-DOCUMENT-NUMBER: 20020155971

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020155971 A1

TITLE: Enzyme tablets for cleaning improvement

PUBLICATION-DATE: October 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Laustsen, Mads Aage	Lyngby		DK	
Johansen, Charlotte	Holte		DK	

APPL-NO: 09/ 821343

DATE FILED: March 29, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60195519 20000406 US

non-provisional-of-provisional 60218181 20000714 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	2000 00548	2000DK-2000 00548	April 3, 2000
DK	2000 01063	2000DK-2000 01063	July 7, 2000

US-CL-CURRENT: 510/392, 510/444 , 510/446 , 510/447

ABSTRACT:

The present invention concerns an enzyme containing cleaning particle having a size of more than 10.5 mm in its longest dimension, wherein the non-enzyme components of the particle have a detergency of less than 4.

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Summary of Invention Paragraph - BSTX (134):

[0128] The particles of the invention may suitably be used for increasing the cleaning performance of a washing solution. Accordingly particles of the invention may suitably be added to wash water alone or in combination with a conventional **detergent** to obtain an increased cleaning performance, preferably directed towards soiling on textile which is a substrate for the enzyme(s) in the particle. A particularly useful application is found for particles of the invention comprising and oxidoreductases and enhancers. Particles comprising oxidoreductases, preferably laccases, and **peroxidases** such as haloperoxidases

optionally formulated in the particle of the invention together with at least one enhancer, improving the effect of the oxidoreductase, will provide excellent microbial control and **antimicr bial** system in applications in which the particle is used. Such a particle could for example be advantageously used for **killing or inhibiting microbial** cells in a washing liquor and/or on the fabrics to be cleaned in a washing process. Accordingly the **antimicrobial** particle of the invention may be added to a washing processes separately and in individual doses, especially when the laundry is particularly soiled from microbially contaminated soilings or soiling facilitating microbial growth, such as faeces or other human or animal secretions, various foodstuffs and/or organic compositions. This concept may of course also be applied on other objects for which sanitation is desired. Accordingly the invention provides use of a particle of the invention comprising an oxidoreductase and preferably also at least one mediator or enhancer for **antimicrobial** treatment of an object, preferably a cellulose containing fabric. Also using a combination of different enhancer may provide even more improved sanitation effect as different enhancers may have different effect on different types of microbial cells.

PGPUB-DOCUMENT-NUMBER: 20020119207

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020119207 A1

TITLE: Non-toxic antimicrobial compositions and methods of use

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, James R. JR.	Ann Arbor	MI	US	
Hamouda, Tarek	Milan	MI	US	
Shih, Amy	Ann Arbor	MI	US	
Myc, Andrzej	Ann Arbor	MI	US	

APPL-NO: 09/ 965447

DATE FILED: September 27, 2001

RELATED-US-APPL-DATA:

child 09965447 A1 20010927

parent continuation-in-part-of 09891086 20010625 US PENDING

child 09891086 20010625 US

parent continuation-in-part-of 09751059 20001229 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09561111 20000428 US PENDING

child 09561111 20000428 US

parent continuation-in-part-of 09474866 19991230 US ABANDONED

non-provisional-of-provisional 60131638 19990428 US

US-CL-CURRENT: 424/750, 424/727 , 424/755 , 424/757 , 424/769 , 424/776 , 514/643

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention

relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

[0001] The following application is a Continuation-in-Part of U.S. application Ser. No. 09/891,086, filed Jun. 25, 2001, which is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of 09/561,111, filed Apr. 28, 2000, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties. This invention was made in part during work partially supported by the U.S. government under DARPA grant No. MDA972-97-1-0007. The government has certain rights in the invention.

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Detail Description Paragraph - DETX (187):

[0251] Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); burn wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2%+5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% clotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium

chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10% sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3% avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate O, 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase,** 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP-95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquatemium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher **detergent** (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); laundry cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

PGPUB-DOCUMENT-NUMBER: 20020102246

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020102246 A1

TITLE: Antimicrobial compositions

PUBLICATION-DATE: August 1, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Schneider, Palle	Lynge		DK	
Moller, Soren	Holte		DK	
Biedermann, Kirsten	Horsholm		DK	
Johansen, Charlotte	Holte		DK	

APPL-NO: 09/ 850316

DATE FILED: May 7, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60204710 20000516 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA 2000 00755	2000DK-PA 2000 00755	May 8, 2000

US-CL-CURRENT: 424/94.4, 424/401 , 510/320

ABSTRACT:

The present invention relates to an enzymatic method for killing or inhibiting microbial cells or microorganisms, e.g. in laundry, on hard surfaces, in water systems, on skin, on teeth or on mucous membranes. The present invention also relates to the use of said enzymatic composition for preserving food products, cosmetics, paints, coatings, etc.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims, under 35 U.S.C. 119, priority or the benefit of Danish application no. PA 2000 00755 filed May 8, 2000 and U.S. application no. 60/204,710 filed May 16,2000, the contents of which are fully incorporated herein by reference.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (149):

[0146] In a specific aspect, the invention provides a **detergent** additive comprising the **antimicr bial** composition of the invention. The **detergent** additive as well as the **detergent** composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an **oxidase,** e.g., a laccase, and/or a **peroxidase**.

PGPUB-DOCUMENT-NUMBER: 20020094331

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020094331 A1

TITLE: ANTIMICROBIAL COMPOSITION CONTAINING AN OXIDOREDUCTASE AND AN ENHANCER OF THER N-HYDROXYANILIDE-TYPE

PUBLICATION-DATE: July 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
JOHANSEN, CHARLOTTE	HOLTE		DK	
DEUSSEN, HEINZ-JOSEF	SOEBORG		DK	

APPL-NO: 09/ 437106

DATE FILED: November 9, 1999

CONTINUED PROSECUTION APPLICATION: This is a publication of a continued prosecution application (CPA) filed under 37 CFR 1.53(d).

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60108651 19981116 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA199801441	1998DK-PA199801441	November 9, 1998

US-CL-CURRENT: 424/94.4, 435/405

ABSTRACT:

The present invention relates to an enzymatic composition capable of killing or inhibiting microbial cells or micro-organisms, e.g. in laundry, on hard surfaces, in water systems, on skin, on teeth or on mucous membranes. The present invention also relates to the use of said enzymatic composition for preserving food products, cosmetics, paints, coatings, etc.

---------- KWIC ---------

Detail Description Paragraph - DETX (122):

[0139] In a specific aspect, the invention provides a **detergent** additive comprising the **antimicrobial** composition of the invention. The **detergent** additive as well as the **detergent** composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase,

an **xidase**, e.g., a laccase, and/or a **per xidase**.

PGPUB-DOCUMENT-NUMBER: 20020045667

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020045667 A1

TITLE: Non-toxic antimicrobial compositions and methods of use

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Baker, James R. JR.	Ann Arbor	MI	US	
Hamouda, Tarek	Ypsilanti	MI	US	
Shih, Amy	Ann Arbor	MI	US	
Myc, Andrzej	Ann Arbor	MI	US	

APPL-NO: 09/ 891086

DATE FILED: June 25, 2001

RELATED-US-APPL-DATA:

child 09891086 A1 20010625

parent continuation-in-part-of 09751059 20001229 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09561111 20000428 US PENDING

child 09751059 20001229 US

parent continuation-in-part-of 09474866 19991230 US ABANDONED

non-provisional-of-provisional 60131638 19990428 US

US-CL-CURRENT: 514/642, 514/724

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

[0001] The following application is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of

09/561,111, filed Apr. 28, 2000, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties.

---------- KWIC ---------

Detail Description Paragraph - DETX (186):

[0252] Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); bum wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2% +5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% ciotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10%

sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3% avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase,** 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP-95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquaternium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher **detergent** (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); laundry cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

PGPUB-DOCUMENT-NUMBER: 20020028754

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020028754 A1

TITLE: Antimicrobial compositions

PUBLICATION-DATE: March 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Johansen, Charlotte	Holte		DK	
Aaslyng, Dorrit	Vaerlose		DK	

APPL-NO: 09/ 899689

DATE FILED: July 5, 2001

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60220538 20000725 US

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
DK	PA 2000 01121	2000DK-PA 2000 01121	July 21, 2000

US-CL-CURRENT: 510/302, 510/205 , 510/309 , 510/392

ABSTRACT:

The invention provides an antimicrobial composition comprising an enzymatic component and one or more non-enzymatic biocides; a method for killing or inhibiting microbial cells comprising a treatment with the antimicrobial composition; and a detergent composition comprising the antimicrobial composition. The invention provides an improved antimicrobial effect.

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims, under 35 U.S.C. 119, priority or the benefit of Danish application no. PA 2000 01121 filed Jul. 21, 2000 and U.S. application Ser. No. 60/220,538 filed Jul. 25, 2000, the contents of which are fully incorporated herein by reference.

---------- KWIC ---------

Detail Description Paragraph - DETX (160):

[0167] In a specific aspect, the invention provides a **detergent** additive comprising the **antimicr bial** composition of the invention and a surfactant.

The **detergent** additive as well as the **detergent** composition may comprise one or more other enzymes such as a protease, a lipase, a cutinase, an amylase, a carbohydrase, a cellulase, a pectinase, a mannanase, an arabinase, a galactanase, a xylanase, an **oxidase,** e.g., a laccase, and/or a **peroxidase**.

PGPUB-DOCUMENT-NUMBER: 20010042932

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20010042932 A1

TITLE: Process for preparing microparticles through phase inversion phenomena

PUBLICATION-DATE: November 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Mathiowitz, Edith	Brookline	MA	US	
Chickering, Donald III	Pfulgerville	TX	US	
Jong, Yong	Warwick	RI	US	
Jacob, Jules	Taunton	MA	US	

APPL-NO: 09/ 853329

DATE FILED: May 11, 2001

RELATED-US-APPL-DATA:

child 09853329 A1 20010511

parent division-of 09442723 19991118 US GRANTED

parent-patent 6235224 US

child 09442723 19991118 US

parent division-of 08686928 19960703 US GRANTED

parent-patent 6143211 US

non-provisional-of-provisional 60001365 19950721 US

US-CL-CURRENT: 264/4.1

ABSTRACT:

A process for preparing nanoparticles and microparticles is provided. The process involves forming a mixture of a polymer and a solvent, wherein the solvent is present in a continuous phase and introducing the mixture into an effective amount of a nonsolvent to cause the spontaneous formation of microparticles.

RELATED APPLICATIONS

[0001] This application is a divisional of co-pending U.S. patent application

Ser. No. 09/442,723, filed Nov. 18, 1999, currently pending which is a divisional of U.S. patent application Ser. No. 08/686,928, filed Jul. 3, 1996, now issued as U.S. Pat. No. 6,143,211 on Nov. 7, 2000, which claims priority to under 35 USC section 119 to U.S. Provisional Patent Application serial No. 60/001,365 entitled "Process for Preparing Microspheres Through Phase Inversion Phenomena" filed Jul. 21, 1995 by Edith Mathiowitz, Donald E. Chickering III, Yong S. Jong and Jules S. Jacob, now abandoned.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (38):

[0036] In general, the agent includes, but is not limited to, adhesives, gases, pesticides, herbicides, fragrances, antifoulants, dies, salts, oils, inks, cosmetics, catalysts, **detergents,** curing agents, flavors, foods, fuels, metals, paints, photographic agents, biocides, pigments, plasticizers, propellants and the like. The agent also may be a bioactive agent. The bioactive agent can be, but is not limited to: adrenergic agent; adrenocortical steroid; adrenocortical suppressant; aldosterone antagonist; amino acid; anabolic; analeptic; analgesic; anesthetic; anorectic; anti-acne agent; anti-adrenergic; anti-allergic; anti-amebic; anti-anemic; anti-anginal; anti-arthritic; anti-asthmatic; anti-atherosclerotic; **antibacterial**; anticholinergic; anticoagulant; anticonvulsant; antidepressant; antidiabetic; antidiarrheal; antidiuretic; anti-emetic; anti-epileptic; antifibrinolytic; antifungal; antihemorrhagic; antihistamine; antihyperlipidemia; antihypertensive; antihypotensive; anti-infective; anti-inflammatory; **antimicrobial**; antimigraine; antimitotic; antimycotic, antinauseant, antineoplastic, antineutropenic, antiparasitic; antiproliferative; antipsychotic; antirheumatic; antiseborrheic; antisecretory; antispasmodic; antithrombotic; anti-ulcerative; antiviral; appetite suppressant; blood glucose regulator; bone resorption inhibitor; bronchodilator; cardiovascular agent; cholinergic; depressant; diagnostic aid; diuretic; dopaminergic agent; estrogen receptor agonist; fibrinolytic; fluorescent agent; free oxygen radical scavenger; gastrointestinal motility effector; glucocorticoid; hair growth stimulant; hemostatic; histamine H2 receptor antagonists; hormone; hypocholesterolemic; hypoglycemic; hypolipidemic; hypotensive; imaging agent; immunizing agent; immunomodulator; immunoregulator; immunostimulant; immunosuppressant; keratolytic; LHRH agonist; mood regulator; mucolytic; mydriatic; nasal decongestant; neuromuscular blocking agent; neuroprotective; NMDA antagonist; non-hormonal sterol derivative; plasminogen activator; platelet activating factor antagonist; platelet aggregation inhibitor; psychotropic; radioactive agent; scabicide; sclerosing agent; sedative; sedative-hypnotic; selective adenosine AI antagonist; serotonin antagonist; serotonin inhibitor; serotonin receptor antagonist; steroid; thyroid hormone; thyroid inhibitor; thyromimetic; tranquilizer; amyotrophic lateral sclerosis agent; cerebral ischemia agent; Paget's disease agent; unstable angina agent; vasoconstrictor; vasodilator; wound healing agent; xanthine **oxidase** inhibitor.

US-PAT-NO: 6559189

DOCUMENT-IDENTIFIER: US 6559189 B2

TITLE: Non-toxic antimicrobial compositions and methods of use

DATE-ISSUED: May 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Baker, Jr.; James R.	Ann Arbor	MI	N/A	N/A
Hamouda; Tarek	Ypsilanti	MI	N/A	N/A
Shih; Amy	Ann Arbor	MI	N/A	N/A
Myc; Andrzej	Ann Arbor	MI	N/A	N/A

APPL-NO: 09/ 891086

DATE FILED: June 25, 2001

PARENT-CASE:

The following application is a Continuation-in-Part of U.S. application Ser. No. 09/751,059, filed Dec. 29, 2000, which is a Continuation-in-part of 09/561,111, filed Apr. 28, 2000, now U.S. Pat. No. 6,506,803, which is a Continuation-in-part of 09/474,866, filed Dec. 30, 1999, now abandoned, each of which claims priority to U.S. provisional application No. 60/131,638, filed Apr. 28, 1999. Each of these applications in hereby incorporated herein by reference in their entireties.

US-CL-CURRENT: 514/642, 514/537

ABSTRACT:

The present invention relates to compositions and methods for decreasing the infectivity, morbidity, and rate of mortality associated with a variety of pathogenic organisms and viruses. The present invention also relates to methods and compositions for decontaminating areas colonized or otherwise infected by pathogenic organisms and viruses. Moreover, the present invention relates to methods and compositions for decreasing the infectivity of pathogenic organisms in foodstuffs.

19 Claims, 46 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 43

---------- KWIC ---------

Detailed Description Text - DETX (186):

Examples of formulations and uses include (ingredients and concentrations are illustrative; modifications may be made as appropriate or desired): acne treatment (e.g., 0.10% adapalene, 20% azelaic acid, 2.5-20% benzoyl peroxide, 1% clindamycin, 1.5-2% erythromycin, 0.05% isotetrinoin, 1% meclocycline, 4% nicotinamide, 1-3% resorcinol, 0.5-5% salicylic acid, 0.5-5% sulfur, 6% sulfurated lime [dilute 1:10], 2.2 mg/ml tetracycline hydrochloride, and 0.025-0.1% tretinoin); deep pore purifying astringent (Witch Hazel); antacids (e.g., <600 mg/5 ml alumina [aluminum hydroxide], aluminum carbonate, aluminium phosphate, <850 mg/5 ml calcium carbonate, 540 mg/5 ml magaldrate, <500 mg/5 ml magnesia (magnesium hydroxide), magnesium carbonate, magnesium oxide, magnesium trisilicate, sodium bicarbonate, <40 mg/5 ml simethicone); aphthous stomatitis treatment (e.g., corticosteroids, 0.12% chlorhexidine); corticosteroids (e.g., 0.05% alclometasone dipropionat, 0.10% amcinonide, 0.025% beclomethasone dipropionate, 0.01-0.1% betamethasone and derivatives, 0.05% clobetasol propionate and derivatives, 0.05% desonide, 0.25% desoximetasone, 0.10% dexamethasone and derivatives, 0.05% diforasone diacetate, 0.10% diflucortolone valerate, 0.03% flumethasone pivalate, 0.01-0.025% fluocinolone acetonide, 0.01-0-0.05% fluocinonide, 0.025-0.05% flurandrenolide, 0.005% fluticasone propionate, 0.10% halcinonide, 0.05% halobetasol propionate, 0.2-2.5% hydrocortisone derivatives, 0.10% mometasone furonate, 0.025-0.5% triamcinolone acetonide); insect bite treatment/cold sore/local anesthetics (e.g., 5-20% benzocaine, 1% butamben, 0.50% dibucaine, 0.5-5% lidocaine, 1% pramoxine, 1% tetracine, +/-0.50% menthol); bum wound infections (e.g., 85 mg/gm mafenide, 1% silver sulfadiazine, 0.5-1.5% framycetin, 0.01% gramicidin [mixed with framycetin], 2% fusidic acid); calluses treatment (e.g., 2-20% resorcinol, resorcinol+sulfur 2% +5-8%); candidiasis (e.g., 2% butoconazole, 1% ciclopirox, 1-10% clotrimazole, clotrimazole and betamethasone 1% and 0.05%, 150 mg/dose econazole, 2% ketoconozole, 500 mg and 100,000 Units metronidazole and nystatin, 2-5% miconazole, 100,000 Units/Gram nystatin, 100,000 Units and 1 mg/gram nystatin and triamcinolone, 1% sulconazole, 0.4-0.8% terconazole, 6.50% tioconazole); antifungus products (e.g., 3% clioquinol, 1% haloprogin, 1% naftifine, 1% tolnaftate, 1% terbinafine, 1% oxiconazole); Tinea versicolor (e.g., 1% haloprogin, 2% ketoconazole); ODOR GUARD Shoe Deodorizer (e.g., 5.0% Sodium chlorite); dandruff (e.g., 2% chloroxine, 1-25% coal tar, 2% ketoconazole, 1-2% pyrithione, 1-10% salicylic acid, 1-2.5% selenium sulfide); dermatitis/psoriasis (e.g., corticosteroids); folliculitis (e.g., 3% clioquinol); herpes (e.g., 5% acyclovir); impetigo (2% mupirocin); insect repellent (e.g., 7.5-100% diethyltoluamide); moisturizing lotion (e.g., dimethicone, allantoin, camphor, menthol, eucalyptus); mouth infection (e.g., 0.12% chlorhexidine); pediculosis capitis (e.g., 1% lindane [benzyl benzoate]); scabies (e.g., 0.50% malathion, 1-5% permethrin, 0.18-0.33% and 2.2-4% pyrethrins and piperonyl butoxide); scabies (e.g., 10% crotamiton, 0.5-10% sulfur, 6% sulfurated lime); psoriasis (e.g., 0.1-1% anthralin, 0.01% calcipotriene, 1-25%, cool tar, 1% methoxsalen, 1-3% resorcinol); rosacea (e.g., 0.75% metronidazole, 2-10% sulfur); skin infection (Bacterial)/Ulcers (e.g., 1.0% chloramphenicol, 3.0% chlorotetracycline, 1.0% clindamycin, 3.0% clioquinol, 1.5-2% erythromycin, 0.1% gentamycin, 2-7% iodine, 2.0% mupirocin, 0.5% neomycin, 10,000 units/gm polymyxin B, 500 units/gm bacitracin, 1.0% silver sulfadiazine, 3% tetracycline); spermicidal (e.g., nonoxynol 9, nanoxynol 9+/-condom); sunscreen agents (e.g., 5-15% aminobenzoic acid, 3%

avobenzone, 3% dioxybenzone, 4-15% homosalate, 2-3% lisadimate, 3.5-5% menthyl anthranilate, 7-10% octocrylene, 2-7.5% octyl mehtoxycinnamate, 3-5% octyl salicylate, 2-6% oxybenzone, 1.4-8% padimate 1-4% phenylbenzimidazole sulfonic acid, 1-5% roxadimate, 5-10% sulisobenzone, 2-25% titanium dioxide, 5-12% trolamine salicylate, zinc oxide); toothpaste (e.g., sodium fluoride, sodium monofluorophosphate, amine fluoride, stannous fluoride); teeth whiteners (e.g., hydrogen peroxide, carbopol 956, sodium hydroxide, sodium acid phosphate, sodium stannate); tarter fighting (e.g., polypyrophosphate, tetrasodium pyrophosphate); toothache (e.g., 10-20% benzocaine); teeth sensitivity protection (e.g., baking soda, 5.0% potassium nitrate); mouthwash (e.g., 0.006% lysozyme, 0.006% lactoferrin, 4000 units/100 mL glucose **oxidase,** 4000 units/100 mL lactoperosidase); vaginosis (e.g., 2% clindamycin, 0.75-10% metronidazole); warts, common (e.g., 2-20% resorcinol, 13% or 40% salicylic acid); warts, flat (e.g., 0.025-0.1% tretinoin); eye drops (e.g., 70.0% dextran, 0.3% hydroxypropyl methylcellulose 2910, 1.4% polyvinyl alcohol, 0.6% povidone); contact lens cleaners (e.g., 3.0% hydrogen peroxide, citrate, tetronic 1304, AMP -95); contact lens (e.g., sodium chloride, boric acid, sorbitol, edetate disodium); contact lens **disinfectant** (e.g., 0.0010% polyquad [polyquaternium-1], 0.0005% aldox [myristamidopropyl dimethylamine]); deodorant (e.g., 19.0% aluminum zirconium); anti-bacterial deodorant soap (e.g., triclocarban); diaper Rash (e.g., 40.0% zinc oxide, dimethicone); anti-bacterial wipes for pets (e.g., lidocaine HCl); cat litter (e.g., baking soda); dishwasher **detergent** (e.g., 2.7% phosphorous, 1.19 g phosphates); tub and shower cleaner (e.g., monocarbamide hydrochloride); glass and surface cleaner (e.g., 3.5% isopropanol, 0.3% propylene glycol); toilet bowl cleaner (e.g., 51.0% 1-Bromo-3-chloro-5,5-dimethylhydantonin, 23.3% 1,3-dichloro-5,5-dimethylhydantonin, 9.0% 1,3-dichloro-5-ethyl-5-methylhydantonin); laundry cleaner (e.g., 5.3% sodium nonanoxloxy benzene sulfonate, 5.3% perboric acid, sodium salt); and pet fresh-carpet cleaner (e.g., 0.3% geraniol, rosemary oil, cedar oil, geranium oil, citronella oil, lemongrass oil, cinnamon oil, mint oil).

US-PAT-NO: 6417151

DOCUMENT-IDENTIFIER: US 6417151 B1

TITLE: Activators for peroxide compounds in detergents and cleaning agents

DATE-ISSUED: July 9, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grothus; Marita	Friedberg	N/A	N/A	DE
Weiss; Albrecht	Langenfeld	N/A	N/A	DE
Kottwitz; Beatrix	Duesseldorf	N/A	N/A	DE
Pegelow; Ulrich	Duesseldorf	N/A	N/A	DE
Uphues; Guenter	Monheim	N/A	N/A	DE
Prueser; Inken	Duesseldorf	N/A	N/A	DE

APPL-NO: 09/ 402404

DATE FILED: October 4, 1999

PARENT-CASE:

This application is filed under 35 U.S.C. 371 and based on PCT/EP98/01804, filed Mar. 26, 1998.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	197 13 852	April 4, 1997

PCT-DATA:
APPL-NO: PCT/EP98/01804
DATE-FILED: March 26, 1998
PUB-NO: WO98/45398
PUB-DATE: Oct 15, 1998
371-DATE: Oct 4, 1999
102(E)-DATE:Oct 4, 1999

US-CL-CURRENT: 510/312, 510/309

ABSTRACT:

A detergent or disinfectant composition comprising is presented having 0.5 to 10 percent by weight of an activator compound which under perhydrolysis conditions forms a percarboxylic acid, and releases a leaving group capable of being used as a substrate for enzymes, and up to 50 percent by weight of a peroxygen compound. The composition increases the oxidation of peroxide compounds in oxidation, bleaching, detergent, cleaning and disinfecting solutions, especially at low temperatures.

25 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (36):

Enzymes suitable for use in the **detergent/disinfectants** are enzymes from the class of proteases, lipases, cutinases, amylases, pullulanases, hemicellulases, cellulases, **oxidases and peroxidases** and mixtures thereof, i.e. enzymes which have no perhydrolysis activity in the sense according to the invention. Particularly suitable enzymes are those obtained from fungi or bacteria, such as Bacillus subtilis, Bacillus licheniformis, Streptomycs griseus, Humicola lanuginosa, Humicola insolens, Pseudomonas pseudoalcaligenes or Pseudomonas cepacia. As described for example in International patent applications WO 92/11347 or WO 94/23005, the enzymes optionally used may be adsorbed onto supports and/or encapsulated in shell-forming substances to protect them against premature inactivation. They are added to the **detergents/disinfectants** according to the invention in quantities of preferably up to 5% by weight and, more preferably, between 0.2% by weight and 2% by weight. By virtue of their additional bleaching effect or effectiveness in inhibiting dye transfer, particular preference is attributed to the use of **peroxidases** which may optionally be used in combination with so-called mediators which are known, for example from International patent applications WO 94/12619, WO 94/12620 and WO 94/12621.

US-PAT-NO: 6287585

DOCUMENT-IDENTIFIER: US 6287585 B1

TITLE: Methods for laundry using polycations and enzymes

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johansen; Charlotte	Holte	N/A	N/A	DK

APPL-NO: 09/ 143622

DATE FILED: August 28, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation application of PCT/DK97/00098 filed Mar. 5, 1997 and claims priority under 35 U.S.C. 119 of Danish application 0262/96 filed Mar. 6, 1996, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	0262/96	March 6, 1996

US-CL-CURRENT: 424/405, 510/276 , 510/300 , 510/360 , 510/530

ABSTRACT:

The present invention provides a method of killing or inhibiting the growth of microbial cells present on laundry, comprising contacting the cells with a composition comprising a poly-cationic compound, preferably a polyamino acid, a polyvinylamine, a copolymer prepared from vinylamine and one or more carboxylic acid anhydrides, e.g. a polymer comprising 0.1-100 mol % vinyl amine or ethyleneimine units, 0-99.9 mol % units of at least one monomer selected from N-vinylcarboxamides of the formula I ##STR1##

wherein R.sup.1 and R.sup.2 are hydrogen or C.sub.1 -C.sub.6 -alkyl;

vinyl formate, vinyl acetate, vinyl propionate, vinyl alcohol, C.sub.1 -C.sub.6 -alkyl vinyl ether, mono ethylenic unsaturated C.sub.3 -C.sub.8 -carboxylic acid, and esters, nitrites, amides and anhydrides thereof, N-vinylurea, N-imidazoles and N-vinyl imidazolines; and

0-5 mol % units of monomers having at least two unsaturated ethylenic double bonds;

and one or more enzymes, preferably glycanases, muranases, oxidoreductases, glucanases, proteases, amylases, lipases, pectinases and xylanases.

8 Claims, 2 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 2

---------- KWIC ---------

Brief Summary Text - BSTX (3):

At this time of increased public interest in reducing the use of chemical additives, it is relevant to consider natural alternatives for **antimicrobial** agents used e.g. for preserving foods and cosmetics, as **disinfectants, and as an antimicrobial** ingredient of **detergent** and cleaning compositions. This has increased interest in preservation using live bacterial cultures (Jeppesen & Huss 1993) and enzymes like lactoperoxidase (Farrag & Marth 1992), glucose **oxidase** (Jeong et al. 1992) and lysozyme (Johansen et al. 1994).

US-PAT-NO: 6235224

DOCUMENT-IDENTIFIER: US 6235224 B1
See image for Certificate of Correction

TITLE: Process for preparing microparticles through phase inversion phenomena

DATE-ISSUED: May 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mathiowitz; Edith	Brookline	MA	N/A	N/A
Chickering, III; Donald	Pfulgerville	TX	N/A	N/A
Jong; Yong S.	Warwick	RI	N/A	N/A
Jacob; Jules S.	Taunton	MA	N/A	N/A

APPL-NO: 09/ 442723

DATE FILED: November 18, 1999

PARENT-CASE:

This application is a divisional of application Ser. No. 08/686,928, filed Jul. 3, 1996, entitled A Process For Preparing Microparticles Through Phase Inversion Phenomena, and now U.S. Pat. No. 6,143,211 which claims priority under 35 U.S.C. .sctn.119 to U.S. Provisional Patent Application No. 60/001,365, filed Jul. 21, 1995.

US-CL-CURRENT: 264/4, 264/4.1 , 427/213.36

ABSTRACT:

A process for preparing nanoparticles and microparticles is provided. The process involves forming a mixture of a polymer and a solvent, wherein the solvent is present in a continuous phase and introducing the mixture into an effective amount of a nonsolvent to cause the spontaneous formation of microparticles.

4 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (39):

In general, the agent includes, but is not limited to, adhesives, gases, pesticides, herbicides, fragrances, antifoulants, dies, salts, oils, inks,

cosmetics, catalysts, **detergents,** curing agents, flavors, foods, fuels, metals, paints, photographic agents, biocides, pigments, plasticizers, propellants and the like. The agent also may be a bioactive agent. The bioactive agent can be, but is not limited to: adrenergic agent; adrenocortical steroid; adrenocortical suppressant; aldosterone antagonist; amino acid; anabolic; analeptic; analgesic; anesthetic; anorectic; anti-acne agent; anti-adrenergic; anti-allergic; anti-amebic; anti-anemic; anti-anginal; anti-arthritic; anti-asthmatic; anti-atherosclerotic; **antibacterial**; anticholinergic; anticoagulant; anticonvulsant; antidepressant; antidiabetic; antidiarrheal; antidiuretic; anti-emetic; anti-epileptic; antifibrinolytic; antifungal; antihemorrhagic; antihistamine; antihyperlipidemia; antihypertensive; antihypotensive; anti-infective; anti-inflammatory; **antimicrobial**; antimigraine; antimitotic; antimycotic, antinauseant, antineoplastic, antineutropenic, antiparasitic; antiproliferative; antipsychotic; antirheumatic; antiseborrheic; antisecretory; antispasmodic; antithrombotic; anti-ulcerative; antiviral; appetite suppressant; blood glucose regulator; bone resorption inhibitor; bronchodilator; cardiovascular agent; cholinergic; depressant; diagnostic aid; diuretic; dopaminergic agent; estrogen receptor agonist; fibrinolytic; fluorescent agent; free oxygen radical scavenger; gastrointestinal motility effector; glucocorticoid; hair growth stimulant; hemostatic; histamine H2 receptor antagonists; hormone; hypocholesterolemic; hypoglycemic; hypolipidemic; hypotensive; imaging agent; immunizing agent; immunomodulator; immunoregulator; immunostimulant; immunosuppressant; keratolytic; LHRH agonist; mood regulator; mucolytic; mydriatic; nasal decongestant; neuromuscular blocking agent; neuroprotective; NMDA antagonist; non-hormonal sterol derivative; plasminogen activator; platelet activating factor antagonist; platelet aggregation inhibitor; psychotropic; radioactive agent; scabicide; sclerosing agent; sedative; sedative-hypnotic; selective adenosine AI antagonist; serotonin antagonist; serotonin inhibitor; serotonin receptor antagonist; steroid; thyroid hormone; thyroid inhibitor; thyromimetic; tranquilizer; amyotrophic lateral sclerosis agent; cerebral ischemia agent; Paget's disease agent; unstable angina agent; vasoconstrictor; vasodilator; wound healing agent; xanthine **oxidase** inhibitor.

US-PAT-NO: 6200946

DOCUMENT-IDENTIFIER: US 6200946 B1

TITLE: Transition metal ammine complexes as activators for peroxide compounds

DATE-ISSUED: March 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Blum; Helmut	Duesseldorf	N/A	N/A	DE
Mayer; Bernd	Duesseldorf	N/A	N/A	DE
Riebe; Hans-Juergen	Solingen	N/A	N/A	DE
Pegelow; Ulrich	Duesseldorf	N/A	N/A	DE

APPL-NO: 09/ 155850

DATE FILED: October 1, 1998

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	196 20 411	April 1, 1996

PCT-DATA:
APPL-NO: PCT/EP97/01482
DATE-FILED: March 24, 1997
PUB-NO: WO97/36988
PUB-DATE: Oct 9, 1997
371-DATE: Oct 1, 1998
102(E)-DATE:Oct 1, 1998

US-CL-CURRENT: 510/372, 252/186.33 , 510/221 , 510/224 , 510/226 , 510/376 , 510/378

ABSTRACT:

A method of oxidizing, washing, cleaning, or disinfecting a soiled article is provided wherein a peroxygen compound is activated by an effective amount of a complex of the formula (I):

[M (NH.sub.3).sub.6-x (L).sub.x]A.sub.n (I)

wherein M is iron, copper, or ruthenium, x is a number of 0 to 5, L is a ligand, and A is a salt-forming anion. Also provided are compositions comprising 0.0025% to 0.25% by weight of the complex (I).

19 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (37):

Enzymes suitable for use in the **detergents/cleaners/disinfectants** are enzymes from the class of proteases, lipases, cutinases, amylases, pullulanases, hemicellulases, cellulases, **oxidases and peroxidases** and mixtures thereof. Particularly suitable enzymes are those obtained from fungi or bacteria, such as Bacillus subtilis, Bacillus licheniformis, Streptomyces griseus, Humicola lanuginosa, Humicola insolens, Pseudomonas pseudoalcaligenes or Pseudomonas cepacia. As described for example in International patent applications WO 92/11347 or WO 94/23005, the enzymes optionally used may be adsorbed onto supports and/or encapsulated in shell-forming substances to protect them against premature inactivation. They are added to the **detergents,** cleaners and **disinfectants** according to the invention in quantities of preferably not more than 5% by weight and, more preferably between 0.2% by weight and 2% by weight.

US-PAT-NO: 6165761

DOCUMENT-IDENTIFIER: US 6165761 A

TITLE: Carbohydrate oxidase and use thereof in baking

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schneider; Palle	Ballerup	N/A	N/A	DK
Christensen; S.o slashed.ren	Copenhagen	N/A	N/A	DK
Dybdal; Lone	K.o slashed.benhavn	N/A	N/A	DK
Fuglsang; Claus Crone	Niv.ang.	N/A	N/A	DK
Xu; Feng	Woodland	CA	N/A	N/A
Golightly; Elizabeth	Davis	CA	N/A	N/A

APPL-NO: 09/ 217490

DATE FILED: December 21, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish applications PA 1997 01505 filed Dec. 22, 1997 and PA 1998 00763 filed Jun. 4, 1998, and of U.S. provisional application No. 60/068,717 filed Dec. 23, 1997 and provisional application No. 60/088,725 filed Jun. 10, 1998, the contents of which are fully incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	01505/97	December 22, 1997
DK	1998 00763	June 4, 1998

US-CL-CURRENT: 435/190, 435/195 , 435/197 , 435/198 , 435/200 , 435/201 , 435/202 , 435/203 , 435/204 , 435/209

ABSTRACT:

The properties of dough or bread can be improved by the addition of a carbohydrate oxidase which can oxidize the reducing end of an oligosaccharide more efficiently than the corresponding monosaccharide, e.g., preferentially oxidizing maltodextrins or cellodextrins over glucose. A novel carbohydrate oxidase having the capability to oxidize maltodextrins and cellodextrins more efficiently than glucose may be obtained from a strain of Microdochium, particularly M. nivale. The amino acid sequence of the novel carbohydrate oxidase has very low homology (<20% identity) with known amino acid sequences.

13 Claims, 3 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

---------- KWIC ---------

Detailed Description Text - DETX (140):

In addition to the us in baking, discussed above, the carbohydrate **oxidase** may be used, for example, in personal care products such as toothpaste, in particular, where whitening of the teeth is desirable, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations, and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The carbohydrate **oxidase** may also be a component of a laundry **detergent** composition or a dishwashing **detergent** composition and may be used for the generation of hydrogen peroxide. The laundry **detergent** composition may comprise a surfactant, said carbohydrate **oxidase** and a substrate for the carbohydrate **oxidase**. The dishwashing **detergent** composition may comprise said carbohydrate **oxidase** and a bleach precursor or peroxy acid, and a substrate for carbohydrate **oxidase**.

US-PAT-NO: 6153576

DOCUMENT-IDENTIFIER: US 6153576 A

TITLE: Transition-metal complexes used as activators for peroxy compounds

DATE-ISSUED: November 28, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Blum; Helmut	Duesseldorf	N/A	N/A	DE
Mayer; Bernd	Duesseldorf	N/A	N/A	DE
Pegelow; Ulrich	Duesseldorf	N/A	N/A	DE
Speckmann; Horst-Dieter	Langenfeld	N/A	N/A	DE
Krebs; Bernt	Muenster	N/A	N/A	DE
Duda; Mark	Iserlohn	N/A	N/A	DE
Nazikkol; Cetin	Duisburg	N/A	N/A	DE
Reim; Joerg	Duelmen	N/A	N/A	DE

APPL-NO: 09/ 125332

DATE FILED: September 16, 1998

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	196 05 688	February 16, 1996

PCT-DATA:
APPL-NO: PCT/EP97/00550
DATE-FILED: February 7, 1997
PUB-NO: WO97/30144
PUB-DATE: Aug 21, 1997
371-DATE: Sep 16, 1998
102(E)-DATE:Sep 16, 1998

US-CL-CURRENT: 510/311, 510/312 , 510/376

ABSTRACT:

Described are complexes of the transition metals manganese, iron, cobalt, ruthenium, molybdenum, titanium, vanadium and/or copper containing one or more ligands of general formula (I) ou (II)

in which R is a direct bond or an optionally amin-group-substituted alkylene group with 1 to 4 C-atoms, A is a condensed or non-condensed ring system containing at least one nitrogen atom, B is hydrogen, an OH-group or the same as A, and X is a phenyl ring optionally substituted with and/or C.sub.1-4 alkyl or an optionally hydroxy-substituted C.sub.1-4 alkylene group. The complexes are suitable for use as activators or peroxy compounds in oxidative washing,

cleaning and disinfectant solutions, washing and cleaning agents preferably containing 0.0025 to 0.25% by wt. of such activator complexes. ##STR1##

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (40):

Enzymes suitable for use in the **detergents/cleaners/disinfectants** are enzymes from the class of proteases, lipases, cutinases, amylases, pullulanases, hemicellulases, cellulases, **oxidases and peroxidases** and mixtures thereof. Particularly suitable enzymes are those obtained from fungi or bacteria, such as Bacillus subtilis, Bacillus licheniformis, Streptomyces griseus, Humicola lanuginosa, Humicola insolens, Pseudomonas pseudoalcaligenes or Pseudomonas cepacia, for example proteases, such as BLAP.RTM., Optimase.RTM., Opticlean.RTM., Maxacal.RTM., Maxapem.RTM., Esperase.RTM. and/or Savinase.RTM.; amylases, such a Termamyl.RTM., Amylase-LT.RTM., Maxamyl.RTM., Duramyl.RTM. and/or Purafect.RTM. OxAm; lipases, such as Lipolase.RTM., Lipomax.RTM., Lumafast.RTM. and/or Lipozym.RTM.. As described for example in International patent applications WO 92/11347 or WO 94123005, the enzymes optionally used may be adsorbed onto supports and/or encapsulated in shell-forming substances to protect them against premature inactivation. They are added to the **detergents,** cleaners and **disinfectants** according to the invention in quantities of preferably not more than 5% by weight and, more preferably between 0.2% by weight and 3% by weight, enzymes stabilized against oxidative degradation, as known for example from International patent applications WO 94/02597, WO 94/02618, WO 94/18314, WO 94/23053 or WO 95/07350, being particularly preferred.

US-PAT-NO: 6143211

DOCUMENT-IDENTIFIER: US 6143211 A
See image for Certificate of Correction

TITLE: Process for preparing microparticles through phase inversion phenomena

DATE-ISSUED: November 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mathiowitz; Edith	Brookline	MA	N/A	N/A
Chickering, III; Donald	Pfulgerville	TX	N/A	N/A
Jong; Yong S.	Warwick	RI	N/A	N/A
Jacob; Jules S.	Taunton	MA	N/A	N/A

APPL-NO: 08/ 686928

DATE FILED: July 3, 1996

PARENT-CASE:

This application claims priority under 35 USC .sctn. 119 to U.S. application Ser. No. 60/001,365 entitled "Process for Preparing Microspheres Through Phase Inversion Phenomena" filed Jul. 21, 1995 by Edith Mathiowitz, Donald E. Chickering III, Yong S. Jong and Jules S. Jacob.

US-CL-CURRENT: 264/4, 264/4.1 , 427/213.36

ABSTRACT:

A process for preparing nanoparticles and microparticles is provided. The process involves forming a mixture of a polymer and a solvent, wherein the solvent is present in a continuous phase and introducing the mixture into an effective amount of a nonsolvent to cause the spontaneous formation of microparticles.

31 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (38):

In general, the agent includes, but is not limited to, adhesives, gases, pesticides, herbicides, fragrances, antifoulants, dies, salts, oils, inks, cosmetics, catalysts, **detergents,** curing agents, flavors, foods, fuels, metals,

paints, photographic agents, biocides, pigments, plasticizers, propellants and the like. The agent also may be a bioactive agent. The bioactive agent can be, but is not limited to: adrenergic agent; adrenocortical steroid; adrenocortical suppressant; aldosterone antagonist; amino acid; anabolic; analeptic; analgesic; anesthetic; anorectic; anti-acne agent; anti-adrenergic; anti-allergic; anti-amebic; anti-anemic; anti-anginal; anti-arthritic; anti-asthmatic; anti-atherosclerotic; **antibacterial**; anticholinergic; anticoagulant; anticonvulsant; antidepressant; antidiabetic; antidiarrheal; antidiuretic; anti-emetic; anti-epileptic; antifibrinolytic; antifungal; antihemorrhagic; antihistamine; antihyperlipidemia; antihypertensive; antihypotensive; anti-infective; anti-inflammatory; **antimicrobial**; antimigraine; antimitotic; antimycotic, antinauseant, antineoplastic, antineutropenic, antiparasitic; antiproliferative; antipsychotic; antirheumatic; antiseborrheic; antisecretory; antispasmodic; antithrombotic; anti-ulcerative; antiviral; appetite suppressant; blood glucose regulator; bone resorption inhibitor; bronchodilator; cardiovascular agent; cholinergic; depressant; diagnostic aid; diuretic; dopaminergic agent; estrogen receptor agonist; fibrinolytic; fluorescent agent; free oxygen radical scavenger; gastrointestinal motility effector; glucocorticoid; hair growth stimulant; hemostatic; histamine H2 receptor antagonists; hormone; hypocholesterolemic; hypoglycemic; hypolipidemic; hypotensive; imaging agent; immunizing agent; immunomodulator; immunoregulator; immunostimulant; immunosuppressant; keratolytic; LHRH agonist; mood regulator; mucolytic; mydriatic; nasal decongestant; neuromuscular blocking agent; neuroprotective; NMDA antagonist; non-hormonal sterol derivative; plasminogen activator; platelet activating factor antagonist; platelet aggregation inhibitor; psychotropic; radioactive agent; scabicide; sclerosing agent; sedative; sedative-hypnotic; selective adenosine Al antagonist; serotonin antagonist; serotonin inhibitor; serotonin receptor antagonist; steroid; thyroid hormone; thyroid inhibitor; thyromimetic; tranquilizer; amyotrophic lateral sclerosis agent; cerebral ischemia agent; Paget's disease agent; unstable angina agent; vasoconstrictor; vasodilator; wound healing agent; xanthine **oxidase** inhibitor.

US-PAT-NO: 6075001

DOCUMENT-IDENTIFIER: US 6075001 A

TITLE: Enol esters as bleach activators for detergents and cleaners

DATE-ISSUED: June 13, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wilde; Andreas	Duesseldorf	N/A	N/A	DE

APPL-NO: 09/ 171791

DATE FILED: October 26, 1998

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	196 16 693	April 26, 1996

PCT-DATA:
APPL-NO: PCT/EP97/01930
DATE-FILED: April 17, 1997
PUB-NO: WO97/41201
PUB-DATE: Nov 6, 1997
371-DATE: Oct 26, 1998
102(E)-DATE:Oct 26, 1998

US-CL-CURRENT: 510/376, 510/312 , 510/378

ABSTRACT:

A composition containing: (a) a peroxygen compound; and (b) an activator compound corresponding to formula I: ##STR1## wherein R is hydrogen, an aryl, alkyl, alkenyl or cycloalkyl group containing 1 to 17 carbon atoms, n is a number from 1 to 8, A, B and Y, independently of one another, represent hydrogen, an aryl, alkyl, alkenyl or cycloalkyl group containing 1 to 17 carbon atoms or a hydrophilic group selected from the group consisting of --SO.sub.3 H, --OSO.sub.3 H, --PO(OH).sub.2, --OPO(OH).sub.2, --CO.sub.2 H and anions thereof and --N.sup.+ R.sup.1 R.sup.2 R.sup.3 X.sup.-, where R.sup.1, R.sup.2 and R.sup.3, independently of one another, represent hydrogen, an aryl, alkyl, alkenyl or cycloalkyl group containing 1 to 17 carbon atoms and X.sup.- represents a charge-equalizing anion, and wherein at least one of the substituents A, B or Y in the molecule is one of the hydrophilic groups.

20 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Text - BSTX (36):

Enzymes suitable for use in the **detergents/cleaners/disinfectants** are enzymes from the class of proteases, lipases, cutinases, amylases, pullulanases, cellulases, hemicellulases, xylanases, **oxidases and peroxidases** and mixtures thereof. Particularly suitable enzymes are those obtained from fungi or bacteria, such as Bacillus subtilis, Bacillus licheniformis, Streptomyces griseus, Humicola lanuginosa, Humicola insolens, Pseudomonas pseudoalcaligenes or Pseudomonas cepacia. As described for example in European patent EP 0 564 476 or in International patent application WO 94/23005, the enzymes optionally used may be adsorbed onto supports and/or encapsulated in shell-forming substances to protect them against premature inactivation. They are added to the **detergents,** cleaners and **disinfectants** according to the invention in quantities of preferably up to 5% by weight and, more preferably, between 0.2% by weight and 2% by weight.

US-PAT-NO: RE36605

DOCUMENT-IDENTIFIER: US RE36605 E

TITLE: Method to clean and disinfect pathogens on the epidermis by applying a composition containing peroxidase, an iodide compound, a peroxide and a surfactant

DATE-ISSUED: March 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kessler; Jack H.	Southborough	MA	N/A	N/A

APPL-NO: 08/ 963900

DATE FILED: November 4, 1997

REISSUE-DATA:

US-PAT-NO	DATE-ISSUED	APPL-NO	DATE-FILED
05227161	July 13, 1993	681447	April 4, 1991

PARENT-CASE:

This application .ladd.is a continuation of application Ser. No. 08/492,243 filed Jun. 19, 1995, now abandoned, which is a reissue application of Ser. No. 07/681,447 filed Apr. 4, 1991, U.S. Pat. No. 5,227,161 which .laddend.is a continuation of prior U.S. application Ser. No. 515,332 filing date Apr. 27, 1990, now abandoned, which is a continuation of application Ser. No. 240,212 filing date Sept. 8, 1988, now abandoned.

US-CL-CURRENT: 424/94.4, 252/374 , 252/382 , 252/383 , 422/37 , 424/613 , 424/667 , 424/668 , 424/669 , 424/670 , 424/671 , 510/131 , 510/160 , 510/374 , 510/382 , 510/383

ABSTRACT:

This invention relates to a disinfecting epidermal cleaner using peroxidase, peroxide and iodide. The active components are maintained inactive until admixed in a .[.define.]. .ladd.defined .laddend.proportion with water. The pH at which the peroxidase is stored is between 7.0 and 9.0 and the pH of the admixture of the active components is between 3.0 and 6.5.

7 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

---------- KWIC ---------

Brief Summary Text - BSTX (9):

The essential constituents in commercial skin cleaning compositions are an antiseptic agent and a surfactant; however the final composition should exhibit high foaming, good water solubility, adequate detergency and acceptable organoleptic characteristics. Formulation of skin cleaning compositions containing conventional antiseptic agents has been problematical due to incompatibilities resulting from (1) destruction of the activity of said antiseptic agents, (2) phase incompatibility of said antiseptic agents, (3) long-term stability of said antiseptic agents in highly **detergent** compositions, and (4) achieving acceptable organoleptic properties. This application discloses the use of a composition containing **peroxidase,** peroxide and iodide in a prescribed formulation suitable for use as an antiseptic agent to form a **disinfecting** epidermal cleaner which does not suffer from the above incompatibilities.

Detailed Description Text - DETX (2):

The **disinfecting** epidermal cleaner of the present invention comprises a surface active agent, an antiseptic agent formed from the combination of **peroxidase,** a source of peroxide, a source of iodide, and a buffering system to establish a controlled pH of between 3.0 to 6.5 when the skin cleaner is admixed with water. **Peroxidase** and iodide are stored in a buffered environment at a pH between 7.0 and 9.0. The buffering agents of the **peroxidase** component are at a concentration such that upon admixture with water and the buffered peroxide component, the pH of the final admixture is between 3.0 and 6.5. In practice this usually means that the concentration of the buffering agents in the **peroxidase** component is significantly lower than the concentration of pH controlling agents in the peroxide component; that is, the **peroxidase** containing component is weakly buffered. Peroxide is stored in a strongly buffered environment at a pH between 3.0 and 6.5. This patent discloses the ability of a **peroxidase** based **disinfecting** epidermal cleaner to work with a variety of known emollient and **detergent** agents.

US-PAT-NO: 5879921

DOCUMENT-IDENTIFIER: US 5879921 A
See image for Certificate of Correction

TITLE: Recombinant expression of a glucose oxidase from a cladosporium strain

DATE-ISSUED: March 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cherry; Joel R.	Davis	CA	N/A	N/A
Berka; Randy M.	Davis	CA	N/A	N/A
Halkier; Torben	Birkeroed	N/A	N/A	DK

APPL-NO: 08/ 746257

DATE FILED: November 7, 1996

US-CL-CURRENT: 435/190, 435/252.3 , 435/254.11 , 435/254.7 , 435/320.1 , 435/6 , 536/23.2 , 536/24.3

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

25 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (22):

The invention further relates to methods of and compositions for using the glucose **oxidase** obtained according to the method of the present invention. In the baking industry, the glucose **oxidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent The glucose **xidase** of the present invention may also be a component of a laundry **detergent** composition or a dishwashing **detergent** composition and may be

used as a hydrogen peroxide source. The laundry **detergent** composition may comprise a surfactant, said glucose **oxidase,** and a substrate for the glucose **oxidase**. The dishwashing **detergent** composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **oxidase** may particularly be useful for removing stains.

US-PAT-NO: 5834280

DOCUMENT-IDENTIFIER: US 5834280 A

TITLE: Glucose oxidases obtained from a cladosporium

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oxenb.o slashed.ll; Karen M.	Charlottenlund	N/A	N/A	DK
Si; Joan Qi	Laufen	N/A	N/A	CH
Aagaard; Jesper	Lyngby	N/A	N/A	DK

DISCLAIMER DATE: 20150525

APPL-NO: 08/ 746283

DATE FILED: November 7, 1996

PARENT-CASE:

This application is a continuation-in-part of application Ser. No. 08/446,645, filed May 25, 1995, which is a continuation-in-part of PCT/DK95/00178 May 3, 1995, the contents of which are incorporated herein by reference.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DK	504/94	May 3, 1994

US-CL-CURRENT: 435/190, 435/911

ABSTRACT:

The invention is directed to alkaline glucose oxidases comprising novel peptide sequences obtained from a strain of Cladosporium, particulary Cladosporium oxysporum, strain CBS 163.94. Furthermore, the invention relates to methods for producing and using said glucose oxidases.

13 Claims, 9 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 9

---------- KWIC ---------

Brief Summary Text - BSTX (19):

The invention further relates to methods of and compositions for using the glucose **oxidase** obtained according to the method of the present invention. In the baking industry, the glucose **xidase** of the present invention may be added to dough in an amount effective to strengthen gluten quality in dough. In the personal care area, the glucose **oxidase** may be added to toothpaste, in particular, whitening teeth, mouthwash, denture cleaner, liquid soap, skin care creams and lotions, hair care and body care formulations and solutions for cleaning contact lenses in an amount effective to act as an **antibacterial** agent. The glucose **oxidase** of the present invention may also be a component of a laundry **detergent** composition or a dishwashing **detergent** composition and may be used as a hydrogen peroxide source. The laundry **detergent** composition may comprise a surfactant, said glucose **oxidase**, and a substrate for the glucose **oxidase**. The dishwashing **detergent** composition may comprise said glucose **oxidase** and a bleach precursor or peroxy acid, and substrate for glucose **oxidase**. Said glucose **oxidase** may particularly be useful for removing stains.

US-PAT-NO: 5370815

DOCUMENT-IDENTIFIER: US 5370815 A

TITLE: Viscous epidermal cleaner and disinfectant

DATE-ISSUED: December 6, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kessler; Jack H.	Sudbury	MA	01776	N/A

APPL-NO: 08/ 059956

DATE FILED: May 13, 1993

PARENT-CASE:

FIELD

This invention is a continuation in part of U.S. patent application Ser. No. 07/681,447 filed Apr. 4, 1992 which in turn is a continuation of Ser. No. 07/5 15,332 filed Apr. 27, 1990 which in turn is a continuation of Ser. No. 07/240,212 filed Sep. 6, 1988. This invention relates to a disinfecting epidermal cleaner which incorporates peroxidase, a source of peroxide and iodide at a controlled pH to cause antiseptic disinfection in the presence of water. The epidermal cleaner is comprised of a viscous emollient formulation with a high concentration of surface active agents.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
EP	90112045.9	June 25, 1990

US-CL-CURRENT: 510/131, 422/37 , 424/94.4 , 510/372 , 510/374 , 510/383 , 510/393

ABSTRACT:

This invention relates to a viscous epidermal cleaner and disinfectant using peroxidase, peroxide, an iodide compound, surfactants and buffering agents to control the pH when admixed in water for forming a viscous composition with a pH between 3.0 and 6.5 and a viscosity of not less than 1.2 centipoise. The active components are maintained inactive until admixed in a defined proportion with water. The pH at which the peroxidase is stored is between 7.0 and 9.0 and the pH of the admixture of the active components is between 3.0 and 6.5. Alternatively, all of the components of this application can be shipped as dry powders or tablets and dissolved prior to use to yield a viscous aqueous environment that will be applied to the epidermis with no further dilution.

12 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

---------- KWIC ---------

Brief Summary Text - BSTX (6):

The essential constituents in commercial epidermal cleaning compositions are an antiseptic agent and a surfactant; however the final composition should exhibit high foaming, good water solubility, adequate detergency and acceptable organoleptic characteristics. Formulation of epidermal cleaning compositions containing conventional antiseptic agents has been problematical due to incompatibilities resulting from (1) destruction of the activity of said antiseptic agents, (2) phase incompatibility of said antiseptic agents, (3) long-term stability of said antiseptic agents in highly **detergent** compositions, and (4) achieving acceptable organoleptic properties. This application discloses the use of a composition containing **peroxidase,** peroxide and iodide in a prescribed formulation suitable for use as an antiseptic agent to form a **disinfecting** epidermal cleaner which does not suffer from the above incompatibilities.

Detailed Description Text - DETX (2):

The **disinfecting** epidermal cleaner of the present invention comprises a surface active agent, an antiseptic agent formed from the combination of **peroxidase,** a source of peroxide, a source of iodide, and a buffering system to establish a controlled pH of between 3.0 to 6.5 when the epidermal cleaner is admixed with water. **Peroxidase** and iodide are stored in a buffered environment at a pH between 7.0 and 9.0. The buffering agents of the **peroxidase** component are at a concentration such that upon admixture with water and the buffered peroxide component, the pH of the final admixture is between 3.0 and 6.5. In practice this usually means that the concentration of the buffering agents in the **peroxidase** component is significantly lower than the concentration of pH controlling agents in the peroxide component; that is, the **peroxidase** containing component is weakly buffered. Peroxide is stored in a strongly buffered environment at a pH between 3.0 and 6.5. Alternatively, all of the components of this application can be shipped as dry powders or tablets and dissolved prior to use to yield a viscous aqueous environment that will be applied to the epidermis with no further dilution. This patent discloses the ability of a **peroxidase** based **disinfecting** epidermal cleaner to work with a variety of known emollient and **detergent** agents at viscosity levels above 1.2 centipoise.

US-PAT-NO: 5227161

DOCUMENT-IDENTIFIER: US 5227161 A

TITLE: Method to clean and disinfect pathogens on the epidermis by applying a composition containing peroxidase, iodide compound and surfactant

DATE-ISSUED: July 13, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kessler; Jack H.	Ashland	MA	N/A	N/A

APPL-NO: 07/ 681447

DATE FILED: April 4, 1991

PARENT-CASE:

This application is a continuation of prior U.S. application Ser. No. 515,332 filing date Apr. 27, 1990, now abandoned, which is a continuation of application Ser. No. 240,212 filing date Sept. 8, 1988, now abandoned.

US-CL-CURRENT: 424/94.4, 422/37 , 424/613 , 424/667 , 424/668 , 424/669 , 424/670 , 424/671 , 510/131 , 510/160 , 510/374 , 510/382 , 510/383

ABSTRACT:

This invention relates to a disinfecting epidermal cleaner using peroxidase, peroxide and iodide. The active components are maintained inactive until admixed in a define proportion with water. The pH at which the peroxidase is stored is between 7.0 and 9.0 and the pH of the admixture of the active components is between 3.0 and 6.5.

7 Claims, 1 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 1

---------- KWIC ---------

Brief Summary Text - BSTX (9):

The essential constituents in commercial skin cleaning compositions are an antiseptic agent and a surfactant; however the final composition should exhibit high foaming, good water solubility, adequate detergency and acceptable

organoleptic characteristics. Formulation of skin cleaning compositions containing conventional antiseptic agents has been problematical due to incompatibilities resulting from (1) destruction of the activity of said antiseptic agents, (2) phase incompatibility of said antiseptic agents, (3) long-term stability of said antiseptic agents in highly **detergent** compositions, and (4) achieving acceptable organoleptic properties. This application discloses the use of a composition containing **peroxidase,** peroxide and iodide in a prescribed formulation suitable for use as an antiseptic agent to form a **disinfecting** epidermal cleaner which does not suffer from the above incompatibilities.

Detailed Description Text - DETX (2):

The **disinfecting** epidermal cleaner of the present invention comprises a surface active agent, an antiseptic agent formed from the combination of **peroxidase,** a source of peroxide, a source of iodide, and a buffering system to establish a controlled pH of between 3.0 to 6.5 when the skin cleaner is admixed with water. **Peroxidase** and iodide are stored in a buffered environment at a pH between 7.0 and 9.0. The buffering agents of the **peroxidase** component are at a concentration such that upon admixture with water and the buffered peroxide component, the pH of the final admixture is between 3.0 and 6.5. In practice this usually means that the concentration of the buffering agents in the **peroxidase** component is significantly lower than the concentration of pH controlling agents in the peroxide component; that is, the **peroxidase** containing component is weakly buffered. Peroxide is stored in a strongly buffered environment at a pH between 3.0 and 6.5. This patent discloses the ability of a **peroxidase** based **disinfecting** epidermal cleaner to work with a variety of known emollient and **detergent** agents.